

# EUCLIDIS DATA

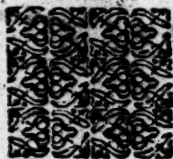
*succinctè demonstrata:*

Unà cum Emendationibus  
quibusdam & Additionibus  
ad Elementa

EUCLIDIS  
nuper edita.

*Operâ*

M<sup>ri</sup>. I. S. BARROVV,  
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UM



¶ Ornatissimo viro  
D. JACOBO STOCK,  
amico suo & patrono  
singulari.



*Ec publicâ, nec tui nominis luce di-  
gnum censeo, hunc paucorum dierum  
partum pusillum & præmaturum.*

*Qui quidem quod se mundo, quodq;  
Tibi spectandum obtulerit, duplici*

*nomine arrogantia speciem incurrit. Sed utrinque  
parata est excusatio qualiscunque. Nam amico ob-  
temperatum oportuit jubenti mitterem hunc libellum  
Euclidæis (quæ cognatione proximâ attingit) Ele-  
mentis subjungendum. In eum quicquid est in publi-  
cum aut peccati aut meriti protinus rejicio, facti cujus  
author fuit, rationem redditurum. In Te autem de-  
lictum quod maximè aggravat, idem potenter exte-  
nuat, Tibi tantum debere. Nam cum iis, qui Diis  
ipsis sacrificia, ac modica magnis Regibus donaria  
offerre non dubitârunt, satius esse credo, etiam pro  
immenfis beneficiis parum, quàm nihil rependere. Suf-  
ficiat igitur regessisse, me Tibi multis, magnisque no-  
minibus obstrictum fore: Vices, quas potuero, maxi-  
mas referre debere; ultra vota & grates nihil posse;  
Illa privatim, hæc publicè persolvas præcellere, quibus  
agendis, quam jamdiu spe & studio aucupor, occasio-  
nem nondum compareres præstare hanc oblatam præ-  
hendere, quamvis exilem, quàm elapsam nequicquam  
penitentia prosequi. Esto igitur hæc oblatio pignus  
quoddam, & præludium futura amplioris, in qua me-*

ritorum in me Tuorum historia uberior ac distinctior  
commemoranda occurreret. *Qua* simpliciter agnoscere,  
non aut susè describere, aut dignè prædicare, præsen-  
tis est instituti. Ac revera jam brevis sum exor-  
xvli. 7. Duq̃, necessitate potiùs coactus, quàm indu-  
ctus consilio. Nam me vela ventis turgentia aliò ar-  
cant; ac vereor nè hæc penè currenti calamo exequen-  
tem, quæ hæc ad te perferet, amica manus, importunâ  
patientia præstoletur. Quid superest igitur, nisi ut te  
domi studiis ac rebus honestis animum intendentem  
salutari præsentia tutetur, eum exorem venerandi ac  
cõpõrte nominis; quem tantæ beneficentiæ benignum re-  
muneratorem jugibus votis exopto; idẽque me ex-  
templò super Tyrrhenos, Ionios, Egeosque fluctus lon-  
ginquam profectiõnem suscepturum comitetur. Obte-  
stor autem, nè tenuis opellæ patrociniũ respicias, quod  
ultrò impertire dignatus es

Tibi devinctissimo,

& obsequentissimo,

I. B.



# Euclidis data.

## Definitiones.

I. **D**ata magnitudine dicuntur spacia, lineæ, anguli, quibus æqualia possumus invenire.

II. Ratio dari dicitur, cui possumus eandem invenire.

III. Rectilineæ figuræ specie dari dicuntur, quarum & singuli anguli dati sunt, & laterum rationes ad invicem datæ sunt.

Hinc, datæ sunt specie figuræ, quibus similes inveniri possunt.

IV. Positione dari dicuntur puncta, lineæ, angulique, quæ eundem situm semper obtinent.

V. Circulus magnitudine dari dicitur, cujus ea quæ ex centro datur magnitudine.

VI. Positione & magnitudine dari dicitur circulus, cujus datur centrum positione, & ea quæ ex centro magnitudine.

VII. Circuli segmenta magnitudine dari dicuntur, in quibus dati sunt magnitudine anguli & segmentorum bases.

VIII. Positione & magnitudine dari dicuntur circuli segmenta, in quibus anguli magnitudine dati sunt, & segmentorum bases positione & magnitudine.

IX. Magnitudo magnitudine major est datâ, quando ablatâ datâ, reliqua eidem æqualis est.

X. Magnitudo magnitudine minor est datâ, quando adjunctâ datâ tota eidem æqualis est.

Ut si A data sit, erit  $A + B \sqsubset B$  datâ. At  $B \sqsupset A + B$  datâ.

XI. Magnitudo magnitudine major est datâ quàm in ratione, quando ablatâ datâ, reliqua ad

A 3

eandem

eandem habet rationem datam.

XII. Magnitudo magnitudine minor est datâ quàm in ratione, quando adjunctâ datâ totâ ad eandem rationem habet datam.

Ut si A data sit, &  $\frac{B}{C}$  detur, erit  $A + B \sqsubset C$ , datâ. q. in r. sin  $A + B$  detur, erit  $B \sqsupset C$  datâ. q. in r.

## PROP. I.

A. B. **D**atarum magnitudinum A B,  
a. b. ad invicem datur ratio.

\* hyp. Nam quia A \* datur, a inveniri potest aliqua a = A. Eodem jure sume b = B. b sch. 7. 5. b estque a. b :: A. B. \* quare ratio  $\frac{A}{B}$  data est. c 1. def. Q. E. D.  $\frac{B}{B}$

## PROP. 2.

A. B. Si data magnitudo A ad aliam  
a. b. aliquam B habeat rationem datam,  
datur etiam hæc alia magnitudine.

\* hyp. Nam ob A \* datam, a sume a = A; ac ob  $\frac{A}{B}$  \*  
a 1. def. d. datam, b sit  $\frac{a}{b} = \frac{A}{B}$ . c ergo b = B. a quare B datur.  
b 2. def. d. Q. E. D.  $\frac{a}{b} = \frac{A}{B}$   
c 9. 5.

## PROP. 3.

A. B. Si quolibet datæ magnitudines  
a. b. A, B componantur, etiam ea A + B  
que ex his componitur, data erit.

a 1. def. Nam a cape a = A, & b = B; b estque a + b  
b 2. ax. 1. = A + B. a quare A + B datur. Q. E. D.

## PROP. 4.

A. B. Si à data magnitudine A auferatur  
a. b. data magnitudo B, etiam reliqua A - B dabitur.

a 1. def. d. a Sint enim a = A, & b = B. ergo A - B =  
b 3. ax. 1. a - b. a proinde A - B datur. Q. E. D.

PROP.

# Euclidis Data.

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## PROP. 5.

A. B. Si magnitudo A ad sui-ipsius ali-  
C. D. quam partem B habeat rationem  
datam, etiam ad reliquam A—B  
habebit rationem datam.

Nam, quia  $\frac{A}{B}$  a data est, b fit A. B :: C. D. a hyp.  
b 2. def. d.  
ergo A. A—B :: C. C—D. b proinde A c cor. 9. 5.  
datur. Q. E. D.  $\frac{A-B}{B}$

## PROP. 6.

A. B. Si componentur dua magnitudi-  
C. D. nes A, B habentes ad invicem ratio-  
nem datam, etiam quæ ex his compo-  
nuntur magnitudo A+B, habebit ad utramque A & B  
rationem datam.

Nam a fit A. B :: C. D. b ergo A + B. a 2. def. d.  
B :: C. + D. D. c quare A+B datur. Similiter b 18. 5.  
B+A datur. Q. E. D.  $\frac{B}{A}$  c 2. def. d.

## PROP. 7.

A. B. Si data magnitudo A + B datâ  
ratione secetur, utrumque segmento-  
rum A, & B datum est.

Nam ob A \* datam, a erit A + B data. b er- \* hyp.  
a 6. dat.  
gò A datur. Eodem modo B datur. Q. E. D. b 2. dat.

## PROP. 8.

A. C. B. Quæ A, B ad idem C rationem  
D. E. F. habent datam, habebunt ad invicem  
rationem datam.

Nam a fit A. C :: D. E. a & C. B :: E. F. a 1. def. d.  
quare ex æquali A. B :: D. F. a ergo A datur.  
Q. E. D.  $\frac{B}{B}$

## Coroll.

Rationes ex datis rationibus compositæ, datæ  
sunt. Ut A fit ex A, & C datis,  
 $\frac{B}{B}$   $\frac{C}{C}$   $\frac{B}{B}$

A 4

PROP.

## Euclidis Data.

## PROP. 9.

A. B. C. Si duæ, pluresve magnitudines  
 D. E. F. A, B, C ad invicem habeant ratio-  
 nem datam, habeant autem illæ ma-  
 gnitudines A, B. C ad alias quasdam D, E, F  
 rationes datas, etsi non easdem, illæ aliæ ma-  
 gnitudines D, E, F etiam ad invicem habent ratio-  
 nes datas.

Nam ratio  $D^a$  fit ex  $b$  datis  $D$ ,  $A$ ,  $B$ ;  $e$  ergò  
 $\frac{D}{E} = \frac{A}{B} \cdot \frac{B}{E}$   
 $\frac{D}{E}$  datur. Eadem de causa datur  $E$ . Q. E. D.  
 $\frac{E}{F}$

$a$  10. def. 5.

$b$  hyp.

$c$  cor. 8. dat.

## PROP. 10.

A. B. C. Si magnitudo magnitudine major  
 fuerit datâ, quàm in ratione; & si-  
 mul utraque illâ eâdem major erit datâ quàm in ra-  
 tione. Sin autem simul utraq; magnitudo eâdem ma-  
 gnitudine major fuerit datâ, quàm in ratione; & re-  
 liqua illa eâdem major erit datâ quàm in ratione; aut  
 reliqua data est cum consequente, ad quam habet al-  
 tera magnitudo rationem datam.

$a$  6. dat.

$b$  11. def. d.

$c$  17. 5.

$d$  5. d.

1. Sint A, & B datæ.  $a$  erit  $B + C$  data,  $b$  er-  
 $\frac{B}{C}$

gò  $A + B + C \sqsubset C$ , datâ q. in r. Q. E. D.

2. Sint A, &  $B + C$  datæ:  $c$  ergò  $\frac{B}{C}$  datur.

proinde  $A + B \sqsubset C$  datâ q. in r. Q. E. D.

3. Sint  $A + B$ , &  $C$  datæ.  $d$  Liquet  $\frac{B}{B+C}$  da-  
 ri. Q. E. D.  $\frac{B}{B+C}$

## PROP. 11.

A. B. C. Si magnitudo magnitudine major  
 sit datâ quàm in ratione, eadem si-  
 mul utrâque major erit datâ quàm in ratione. Et si  
 eadem simul utrâque major sit datâ quàm in ratione,  
 eadem reliquâ magnitudine major erit datâ quàm in  
 ratione.

1. A

# Euclidis Data.

3

1. A, & B dantur. <sup>a</sup> ergò B datur. proinde

<sup>a</sup> 6. dat.  
<sup>b</sup> 11. def. d.  
<sup>c</sup> 5. dat.

$\overline{C}$   $\overline{B+C}$   
A + B  $\square$  B + C datâ q. in r. Q. E. D.

2. A, & B dantur. <sup>a</sup> ergò B datur. proinde

$\overline{B+C}$   $\overline{C}$

A + B  $\square$  C datâ. q. in r. Q. E. D.

## PROP. 12.

A. B. C. Si fuerint tres magnitudines

A, B, C, & prima cum secunda

(A + B) data sit, secunda quoque cum tertia

(B + C) data sit, aut prima A tertiæ C æqualis

est, aut altera alterâ major datâ.

Nam si A + B, & B, + C pares sint, <sup>a</sup> liquet

A & C æuari; sin istæ impares fuerint, <sup>b</sup> liquet

excessum A - C, vel C - A dari. Q. E. D.

## PROP. 13.

D, A + B, C Si fuerint tres magnitudines

E D, A + B, C, & earum pri-

ma D ad secundam A + B

habeat rationem datam; secunda autem A + B, ter-

tiâ C major sit datâ quàm in ratione; prima quoq;

D major erit tertiâ C datâ quàm in ratione.

Sint A, & B, ac D datæ; <sup>a</sup> sitque A + B.

$\overline{C}$   $\overline{A+B}$  <sup>b</sup> 19. 5.

D :: A.E <sup>b</sup> :: B.D - E. ergò <sup>c</sup> E, <sup>d</sup> & B <sup>c</sup> 2. dat.

$\overline{D-E}$  <sup>d</sup> 2. def. d.

& (ob B datam) <sup>e</sup> C dantur. <sup>f</sup> quare D (E +: <sup>e</sup> 8. dat.

$\overline{C}$   $\overline{D-E}$  <sup>f</sup> 11. def. d.

D - E)  $\square$  C datâ q. in r. Q. E. D.

## PROP. 14.

A. C. Si duæ magnitudines A & C

B. D. ad invicem habeant ratio-

E nem datam, utrique autem il-

larum adjiciatur data magnitudo

B & D, tota A + B, C + D, aut habent ratio-

nem datam, aut altera A + B alterâ C + D ma-

ior erit datâ quàm in ratione.

Nam

a 12.5. Nam si  $A.C :: B.D^2 :: A + B.C + D$

b hyp. ob  $A^b$  datam,  $c$  liquet  $A + B$  dari

e 2. def. d.  $\overline{C}$   $\overline{C} + \overline{D}$

d 2. def. d. Saltem  $d$  sit  $A.C :: E.D^2 :: A + E.C + D$ ,

e 2. dat. Ergo  $e A + E$  ac  $e E$ ,  $f$  ideòq;  $B - E$  dantur.

f 4. dat.  $\overline{C} - \overline{D}$ ,

g 11. def. d.  $\therefore$  proinde  $A + B (A + E : + B - E) \sqsubset C + D$  datâ q. in r. Q. E. D.

## PROP. 15.

A. C. Si duæ magnitudines  $A$  &  $C$

B. D. habeant ad invicem rationem da-

E. tam, & ab utraque harum auferatur data magnitudo  $B$  &  $D$ , reli-

quæ magnitudines  $A - B$ ,  $C - D$  ad invicem habebunt aut rationem datam, aut altera  $A - B$ , alterâ  $C - D$  major erit datâ quàm in ratione.

a 19. 5.  $b$  Nam si  $A.C :: B.D^2 :: A - B.C - D$ .

b hyp. ob  $A$  datam,  $c$  liquet  $A - B$  dari.

c 2. def. d.  $\overline{C}$   $\overline{A} - \overline{C}$

d 2. def. 2. Saltem  $d$  sit  $A.C :: E.D^2 :: A - E.C - D$ .

e 2. dat. Ergo  $c A - E$ , &  $e E$ , ac  $f$  ideò  $E - B$  dantur.

f 4. dat.  $\overline{C} - \overline{D}$

g 11. def. d.  $\therefore$  proinde  $A - B (A - E : + E - B) \sqsubset C - D$  datâ q. in r. Q. E. D.

## PROP. 16.

B. C. Si duæ magnitudines  $BC$  ha-

A. D. beant rationem datam, & ab una

E. quidem illarum  $C$  auferatur data magnitudo  $D$ , alteri autem  $B$  ad-

jiciatur data magnitudo  $A$ , tota  $A + B$  residuâ  $C - D$  major erit datâ quàm in ratione.

a 2 def. d. Sit enim  $C.B a :: D.E b :: C - D. B - E$ . er-

b 19. 5. gò  $c C - D$  &  $d E$ , ac  $e$  ideò  $E + A$  dantur.  $f$  pro-

c 2. def. d.  $\overline{B} - \overline{E}$ ,

d 2. dat. inde  $B + A (E + A : + B - E) \sqsubset C - D$  datâ

f 11. def. d. q. in r. Q. E. D.

PROP.

PROP. 17.

$A+B.$   $D+E.$  Si fuerint tres magnitudi-  
 $C.$  nes  $A+B$ ,  $C$ ,  $D+E$ ; &  
 prima quidem  $A+B$  secun-  
 dâ  $C$  major sit datâ quàm in ratione, tertia quoque  
 $D+E$  eâdem secundâ  $C$  major sit datâ quàm in  
 ratione; prima  $A+B$  ad tertiam  $D+E$  aut ratio-  
 nem habebit datam, aut altera alterâ major erit datâ  
 quàm in ratione.

Nam ob  $A$ ,  $D$ , &  $\frac{B}{C}$ ,  $\frac{E}{C}$  a datas,  $\frac{B}{C}$  erit  $B$  data,  $\frac{E}{C}$  <sup>a hyp.</sup> 8. dat.

ergò per 14. hujus.

PROP. 18.

$A+C.$   $E.$   $G.$  Si fuerint tres magni-  
 $B+D.$   $F.$   $H.$  tudines, atque ex his una  
 utrâque reliquarum major  
 sit datâ quàm in ratione; reliquæ duæ aut datam  
 rationem habebunt ad invicem, aut altera alterâ ma-  
 jor erit datâ quàm in ratione.

Datæ sint  $A$ ,  $B$ ,  $C$ ,  $D$  ac sit  $A+C=B+D$ .  
 $\frac{A}{E}$ ,  $\frac{F}{H}$ ;

Sitque  $C.E^a :: A.G^b :: C+A.E+G$ . itémq;  $\frac{A}{E} = \frac{G}{H}$  2. def. d.  
 $D.F^a :: B.H^b :: D+B.F+H$ . <sup>c</sup> ergò  $\frac{B}{F} = \frac{H}{D}$  12. 5.  
 $\frac{C+A}{E+G}$  hoc est  $\frac{B+D}{E+G}$ , <sup>c</sup> &  $\frac{B}{F} = \frac{H}{D}$  ac <sup>e</sup> idcirco  $\frac{C}{F} = \frac{A}{H}$  2. def. d.  
 $\frac{E+G}{F+H}$  7. 5.  
 $\frac{E+G}{F+H}$  quoniam &  $G$  ac  $H$  <sup>f</sup> dantur. ergò per 15. <sup>f</sup> 8. 5.  
 (hujus.

PROP. 19.

$A+B.$   $E.$  Si fuerint tres magnitudines, &  
 $C+D.$   $F.$  prima quidem magnitudo secundâ  
 magnitudine major sit datâ quàm  
 in ratione, sit quoque secunda major tertiâ datâ quàm  
 in ratione; prima magnitudo tertiâ magnitudine ma-  
 jor erit datâ quàm in ratione.

Sint  $A$ ,  $C$ , &  $\frac{C+D}{B}$ ,  $\frac{D}{E}$  datæ; dico  $A+B$

$\frac{A}{E}$  datâ q. in r.

Nam

- a 2. def. d. Nam sit  $C + D. B^a :: C. F^b :: D. B - F$ . er-  
 b 19. 5. gò  $C^c$  &  $F^d$ , ac  $e$  ideò  $F + A$ , &  $e$   $D^f$  ideò q;  
 c 2. def. d.  $\frac{F}{B - F}$   
 d 2. dat.  $\frac{B}{B - F}$  dantur. & proinde  $A + B(F + A : + B - F)$   
 e 3. dat.  $\frac{B}{B - F}$   
 f 8. dat.  $\frac{B}{B - F}$   
 g 11. def. d.  $\frac{B}{B - F}$  datâ q. in r. Q. E. D.

## PROP. 20.

A. C. E. Si data fuerint duæ magnitudines A, C; & auferantur ab ipsis magnitudines B, D habentes ad invicem rationem datam, residua magnitudines A—B, C—D aut habebunt ad invicem rationem datam, aut altera A—B alterâ C—D major erit datâ quàm in ratione.

- a 19. 5. Nam si A. C :: B. D a :: A—B. C—D; b li-  
 b 2. def. d. quet A—B dari.

$$\frac{C - D}{A - B}$$

- c 2. dat. Saltem sit D. B<sup>b</sup> :: C. E<sup>a</sup> :: C—D. E—B. er-  
 d 4. dat. gò b  $\frac{C}{E}$  &  $e$  E, ac  $d$  propterea A—E,  $b$  itémque  
 $\frac{C - D}{E - B}$

- e 11. def. d. C—D data sunt.  $e$  ergò A—B (A—E : + E—B)  
 $\frac{C - D}{E - B}$  datâ q. in r. Q. E. D.

## PROP. 21.

A. C. E. Si data fuerint duæ magnitudines A, C, & adjiciantur ipsis aliæ magnitudines B, D habentes ad invicem rationem datam, totæ A+B, C+D aut habebunt ad invicem rationem datam, aut altera A+B alterâ C+D major erit datâ quàm in ratione.

- a 12. 5. Nam si B. D :: A. C a :: A+B. C+D, b li-  
 b 2. def. d. quet A+B dari.

$$\frac{C + D}{A + B}$$

- c 2. dat. Saltem sit B. D<sup>b</sup> :: E. C<sup>a</sup> :: B+E. D+C.  
 d 4. dat. ergò  $e$  E,  $d$  ideòque A—E, &  $b$   $\frac{B + E}{D + C}$  dantur.  
 $\frac{D + C}{B + E}$

$e$  ergò



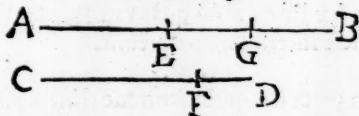
ergo  $A+B (B+E : +A-E) \sqsubset C+D$  da- c 11. def. 6.  
tâ q. in r. Q. E. D.

PROP. 22.

A. Si due magnitudines A, B ad aliam ali-  
B. C. quam magnitudinem C habeant rationem  
datam, & simul utraque A+B ad ean-  
dem C habebit rationem datam.

Nam ob A B <sup>a</sup> datas, b erit A data. <sup>c</sup> quare <sup>a</sup> hyp.  
<sup>b</sup> 8. d. 1.  
<sup>c</sup> 6. d.  
 $\frac{A+B}{B}$  <sup>b</sup> ideóque  $\frac{A+B}{C}$  data est. Q. E. D.

PROP. 23.



Si totum AB ad totum CD habeat rationem  
datam, habeant autem & partes AE, EB ad partes  
CF, FD rationes datas ( etsi non easdem ) habe-  
bunt omnia ad omnia rationes datas.

Nam fit AE. CF <sup>a</sup> :: AG. CD <sup>b</sup> :: GE. FD. <sup>a</sup> 2. def. 6.  
<sup>b</sup> 19 5.  
<sup>c</sup> hyp.  
<sup>d</sup> 8. d. 2.  
<sup>e</sup> 5. d. 1.  
<sup>a</sup> ergo GE datur. quare ( ob EB <sup>c</sup> datam ) <sup>d</sup> erit  
 $\frac{GE}{EB}$   $\frac{FD}{CD}$   
GE ac <sup>e</sup> ideó EB data. ergo quum <sup>e</sup> AB & <sup>c</sup> EB  
 $\frac{AB}{EB}$   $\frac{AG}{GB}$   $\frac{CD}{GD}$   
<sup>a</sup> AG <sup>d</sup> ideóque AB ac proinde <sup>e</sup> AB dentur,  
 $\frac{CD}{GD}$   $\frac{AG}{GB}$   $\frac{CD}{GD}$   
<sup>d</sup> erit EB data. Quare <sup>e</sup> AB, & <sup>d</sup> AE & <sup>c</sup> EB  
 $\frac{AB}{AE}$   $\frac{AE}{EB}$   $\frac{CF}{FD}$   
dantur. Q. E. D.

PROP. 24.

A ————— Si tres rectæ lineæ A, B, C  
B ————— proportionales fuerint; prima  
C ————— autem A ad tertiam C ha-  
beat rationem datam, & ad secundam B habebit rati-  
onem datam.

Nam

*in cor. 20. 6.*

*b 2. def. d.*

*c 1. d.*

Nam  $A. C^a :: Aq. Bq.$  <sup>b</sup> ergo  $Aq$  data est  $Bq$

proinde  $A^c$  datur. Q. E. D.

PROP. 25.



*Si duæ rectæ lineæ, A B, C D positione datæ se mutuo secuerint, punctum E, in quo se invicem secant positione datum est.*

*a 4. def. d.*

<sup>a</sup> Nam hæ lineæ alibi quàm in E, neutrius situ mutato, sese interfecare nequeunt.

*Schol.*

<sup>a</sup> Idem patet de quibuscunque lineis positione datis, sèque in unico puncto interfecantibus: ut de circuli arcu, & recta, &c.

PROP. 26.

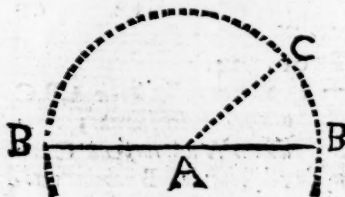


*a 14. ax.*

*b 1. def d.*

*Si recta lineæ A B extremitates A, B positione datæ sint, recta A B positione & magnitudine data est.*  
Positione quidem, <sup>a</sup> quia inter eosdem terminos unica recta duci potest: & magnitudine, <sup>b</sup> quia si centro A per B ducatur circulus, hujus omnes radii ipsi A B æquantur.

PROP. 27.



*Si recta lineæ A B positione, & magnitudine data, data fuerit una extremitas A, & altera extremitas B data erit.*

Nam

# Euclidis Data.

II

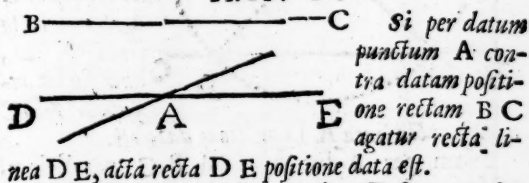
Nam si centro A, spatio  $AC^a = AB^b$  ducatur circulus, cui data recta <sup>a</sup> occurrat in B, <sup>d</sup> erit <sup>b</sup> extremitas B data.

a 1. def. d.  
b 3. post.  
c 2. post.  
d cor. 25.

Schol.

Vides partes puncti B determinandas esse.

PROP. 28.



Nam <sup>a</sup> dic alteram per A ad BC fore parallelam. Hæc idcirco ad DE <sup>b</sup> parallela erit. Quod <sup>c</sup> repugnat.

a 4. def. d.  
b 30. 1.  
c 34. def. 1.

Nota Vocabulum contra in hoc libro parallelissimum significare.

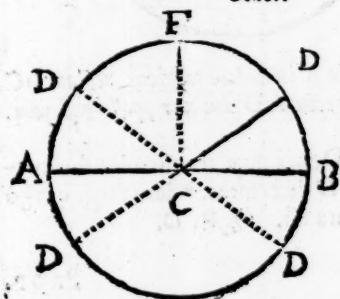
PROP. 29.



<sup>a</sup> Nam quævis alia CE angulum <sup>b</sup> efficiet majorem, vel minorem dato BCD.

a 4. def. d.  
b 9. ax. 1.

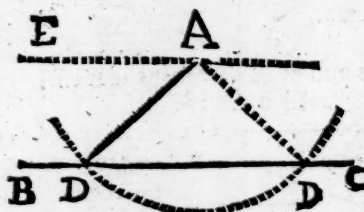
Schol.



Determinari debet situs anguli dati tam respectu perpendicularis CF, quam ipsius AB, ut cernis in apposta figura.

PROP.

## PROP. 30.



Si à dato  
puncto A in  
datam positio-  
ne rectam BC  
agatur recta  
linea A D,  
quæ faciat an-  
gulum ADC

datum, acta linea A D positione data est.

a 28. dat. Nam per A duc A E ad B C parallelam.  
b 1. def. d. Hæc positione datur. Item ang. D A E par  
c 29. dat. dato alterno A D C<sup>b</sup> datus est. c ergò recta  
A D positione data est. Q. E. D.

Schol.

Hinc praxim discimus, à dato puncto ducendi  
rectam, quæ cum data positione recta datum an-  
gulum efficit.

## PROP. 31.

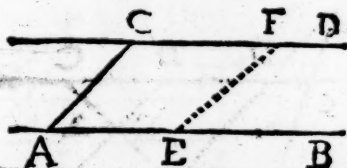


Si à dato puncto A in datam positione rectam BC  
data magnitudine recta AD ducatur, positione quoq;  
data erit.

Nam puncta D, per quæ transit circulus cen-  
tro A<sup>a</sup> spatio A D descriptus, <sup>b</sup> data sunt. c ergò  
b sch. 25. d. A D positione data est. Q. E. D.  
c 26. d.

PROP.

PROP. 32.

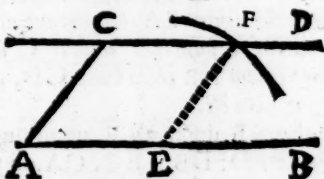


Si in datas positione parallelas rectas AB, CD agatur recta linea AC, quae faciat angulos datos BAC, ACD, acta recta AC magnitudine data est.

Nam ad E (quodvis punctum in AB) fac ang. BEF =<sup>a</sup> BAC. liquet rectas EF, AC<sup>b</sup> parallelas, & c<sup>c</sup> pares fore. d<sup>d</sup> quare AC data est. Q. E. D.

a 1. def. d.  
b 29. 1.  
c 34. 1.  
d 2. def. d.

PROP. 33.



Si in datas positione parallelas rectas AB, CD agatur magnitudine data recta AC, faciet angulos BAC, ACD datos.

Nam ex quovis puncto E in AB, spatio EF<sup>a</sup> = AC describe circumulum occurrentem rectae CD in F. b<sup>b</sup> Liquet EF, & AC parallelas esse c<sup>c</sup> posse ergo.

a 1. def. d.  
b 34. 1.  
c 29. 1.

B

PROP.



Si in datas positione parallelas rectas AB, CD à dato puncto E agatur recta linea ECA, secabitur datâ ratione.

Nam ab E duc rectam EB utcurunque parallelis occurrentem in D, & B. <sup>a</sup> liquet esse EC. CA  
<sup>a</sup> 2. 6. <sup>b</sup> 2. def d. :: ED. DB. <sup>b</sup> quare EC datur. Q. E. D.  
 CA

## PROP. 35.

Si à dato puncto E in datam positione rectam AB agatur recta linea EA, seceturque datâ ratione; agatur autem per punctum sectionis C contra datam positione rectam AB recta linea CD, acta linea CD positione data est.

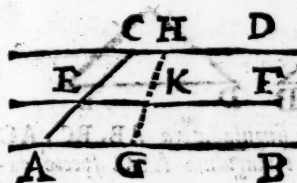
Recta enim EB ducta ab E utcurunque in AB, <sup>a</sup> secetur sic ut ED. DB :: EC. CA. ob punctum  
<sup>a</sup> 10. 6. <sup>b</sup> 28. dat. D datum; <sup>b</sup> erit CD positione data. Q. E. D.

## PROP. 36.

Si à dato puncto E in datam positione rectam lineam AB agatur recta linea EA, adjiciatur autem ipsi aliqua recta EC, quæ ad illam (EA) habeat rationem datam, per extremitatem autem C adiecta linea EC agatur contra datam positione rectam AB recta linea CD, acta linea CD positione data est.

Demonstratio parum differt à præcedenti. Vide fig. 2.

PROP. 37.



Si in datis positione  
parallelas rectas AB,  
CD, agatur recta li-  
nea AC, & secetur  
ratione datâ; agatur  
autem per sectionis  
punctum E contra da-

tas positione rectas AB, CD linea recta EF, acta  
recta EF positione data est.

Nam duc rectam GH, utcumque occurrentem  
parallelis. Hæc<sup>a</sup> secta sit in K ita ut GK. KH ::  
AE. EC. <sup>b</sup> Punctum K parallelæ (EF) situm  
determinat. Q. E. F.

<sup>a</sup> 2 def. d.  
<sup>b</sup> 28. dat.  
& sch. 2. 6.

PROP. 38.



Si in datis positione re-  
ctas parallelas AB, CD  
agatur recta linea AC;  
adjiciatur autem ipsi que-  
dam recta CE, quæ ad  
actam AE habeat ratio-  
nem datam; per extremi-  
tatem autem E adjectæ CE agatur contra datas po-  
sitione parallelas AB, CD recta linea EF, acta recta  
linea EF est data positione.

Demonstratio persimilis est præcedenti. Cerne  
& compara figuras.

B 1

PROP.

## PROP. 39.



Si trianguli ABC singula latera AB, BC, AC magnitudine data sint, triangulum ABC specie datum est.

- a 22. 1. Nam<sup>a</sup> fac triang. DEF ipsi ABC æquilat-  
 b 5. 6. rum. Hoc eidem<sup>b</sup> æquiangulum erit. ergo ABC  
 c 3. def. d. specie datum est. Q. E. D.

## PROP. 40.

Si trianguli ABC singuli anguli A, B, C magnitudine dati sint, triangulum ABC specie datum est.

- a 23. 1. Nam ad quamvis DE<sup>a</sup> fac triang. DEF ipsi  
 b 4. 6. ABC æquiangulum. <sup>b</sup> Hoc eidem simile erit.  
 c 3. def. d. c proinde trigonum ABC specie datum est.  
 Q. E. D.

## PROP. 41.



Si triangulum ABC unum angulum A datum habeat, circa datum autem angulum A duo latera AB, AC ad invicem habeant rationem datam, triangulum ABC specie datum est.

- Nam in uno latere  
 a 1. def. d. datu anguli sume quam-  
 b 6. 6. piam AD; &<sup>a</sup> sit AB. AC :: AD. AE. & duc  
 c 3. def. d. fore. <sup>b</sup> DE. <sup>b</sup> Liqueat trigonum ADE ipsi ABC simile  
 c 3. def. d. fore. <sup>c</sup> Quare ABC specie datum est. Q. E. D.

PROP.



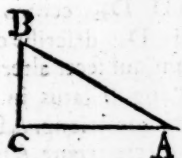
PROP. 42.

Si trianguli ABC latera ad invicem habeant rationem datam, triangulum ABC specie datum est.

Nam<sup>a</sup> fac AB. BC :: DE. EF.<sup>a</sup> & BC. CA<sup>b</sup> 12. 6.  
:: EF. FD.<sup>b</sup> Liquet trigonum DEF trigono ABC<sup>c</sup> 5. 6.  
affimilari. c quare ABC specie datum est.  
Q. E. D. <sup>c</sup> 3. def. d.

Vid. fig. 39.

PROP. 43.



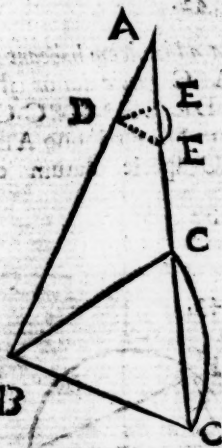
Si trianguli rectanguli ACB circa unum acutum angulorum A latera AB, AC ad invicem rationem habeant datam, triangulum ACB specie datum est.

Nam esto DEF semicirculus utcumque; &  
<sup>a</sup> fac AB. AC :: DE. DF. inventamque DF<sup>a</sup> 12. 5.  
<sup>b</sup> adapta in semicirculo; & duc EF. c Lique<sup>b</sup> 1. 4.  
ang. DFE ipsi ACB affimilari; & <sup>c</sup> proinde<sup>c</sup> 33. 1. &  
ipsum ACB specie dari. Q. E. D. <sup>d</sup> 4. 6. <sup>d</sup> 3. def. d.

B 3

PROP.

## PROP. 44.



Si triangulum ABC habeat unum angulum A datum, circa alium autem angulum ABC latera AB, BC ad invicem habeant rationem datam, triangulum ABC specie datum est.

Nam in crure dati anguli sume quamlibet AD. & fac AB. BC :: AD. DE. centro D spatio DE describe circulum, qui secet alterum dati anguli latus in E. b Erítque triang. ADE

a 2. def. d.

b 7. 6.

c 3. d. f. d.

ipfi ABC simile.quare datur specie triang. ABC. Q. E. D.

## PROP. 45.



Si triangulum BAC unum angulum BAC datum habeat, circa datum autem angulum BAC latera simul utraque tanquam unum (BA + AC) ad reliquum latus (BC)

rationem habeant datam, triangulum BAC specie datum est.

a 9. 1.

b 3. 6.

Datum angulum BAC a bisecet recta AD. b ergò BA. AC :: BD. DC. & componendo BA + AC. AC :: BC. DC. permutando igitur BA + AC. BC :: AC. DC. ergò ob BA + AC

c hyp.

d 2. def. d.

datum, d erit AC data, item ang. DAC sub

DC

duplus

duplus dati BAC<sup>a</sup> datur. <sup>f</sup> ergò ang. C datur. <sup>e</sup> 2. dat.  
<sup>g</sup> proinde trigonum ABC specie datum est. <sup>f</sup> 44. dat.  
<sup>g</sup> 40. dat.

Coroll.

Hinc in triangulo, datis uno latere AB; uno angulo BAC, & ratione aggregati laterum ad basim (R ad S); datur triangulum. Nam datum angulum bisecca, & fac R. S :: AB. BD. & centro B spatio BD duc circulum occurrentem rectæ biseccanti in D; & produc BDC, habes triangulum.

PROP. 46.

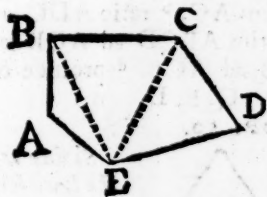
Si triangulum BAC unum angulum C datum habeat, circa alium autem angulum BAC latera simul utraque tanquam unum (BA + AC) habeant ad reliquum (BC) rationem datam, triangulum BAC specie datum est.

Nam bisecto angulo BAC, erit (ut in præcedenti) AC data. item ang. C<sup>a</sup> datus est. ergò a hyp.

DC

ang. DAC, b proinde & duplus BAC datur. b 2. dat.  
<sup>c</sup> quare triang. BAC specie datur. Q. E. D. c 40. dat.  
 Deducetur ab hac corollarium simile præcedenti.

PROP. 47.



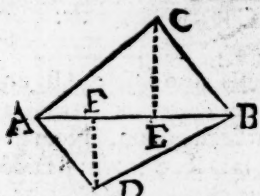
Data specie rectilinea ABCDE in data specie triangu-  
 la BAE, CDE, BCE dividuntur.

Nam ob ang. B, & BA<sup>a</sup> dat. b erit tri- a hyp. &  
 AE ang. BAE spe- 3. def. d.  
 cie datum. Simili discursu triang. CDE specie b 41. dat.  
 datur. <sup>c</sup> quare ang. DCE datus est; Hunc de- c 3. def. d.  
 me ex dato BCD<sup>d</sup>, estque reliquus BCE datus. d 4. dat.  
 Similiter ang. CBE datur. <sup>e</sup> ergò triang. BCE e 40. dat.  
 etiam specie datum est. Q. E. D.

B 4

PROP.

## PROP. 48.



Si ab eadem recta AB describantur triangula ACB, ADB data specie, habebunt ad invicem rationem datam.

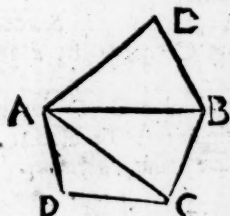
Duc enim perpendiculares CE, DE. Li-

a 40. dat. quet angulos trianguli rectanguli CEB<sup>a</sup>, proinde  
b hyp. & CE dari. ergo ( quum AB<sup>b</sup> data sit ) erit  
 $\frac{AB}{CB}$

c 8. dat. CE, data. Simili discursu datur DE; quare  $\frac{CE}{AB}$ ,  $\frac{DE}{AB}$

d sch. 1. 6. hoc est triang. ACB datur. Q. E. D.  
 $\frac{ADB}{ADB}$

## PROP. 49.



Si ab eadem recta linea AB duo rectilinea quolibet ABCD, AEB data specie describantur, habebunt ad invicem rationem datam.

Nam rectilineum ABCD resolva:ur in triangula.

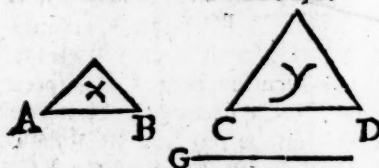
<sup>a</sup> hæc specie data sunt. er-

a 47. dat. go ob communem basim AC, <sup>b</sup> ratio ADC ad

c 6. dat. ACB & <sup>c</sup> proinde totius ABCD ad ACB da-

d 8. dat. tur. <sup>b</sup> item ratio AEB ad ACB. <sup>d</sup> proinde & ABCD ad AEB datur. Q. E. D.

## PROP. 50.



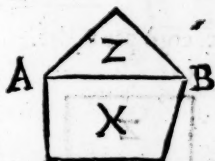
Si due recte linea AB CD ad invicem habeant rationem datam; & ab

illis similia, similiterque descripta rectilinea X, Y habebunt ad invicem rationem datam.

Nam

Nam sit AB. CD :: <sup>a</sup> CD. G. <sup>b</sup> liquet AB <sup>a</sup> 11.6.  
ad G, <sup>c</sup> hoc est X ad Y dari. Q. E. D. <sup>b</sup> 8. dat.  
<sup>c</sup> cor. 20.6

PROP. 51.



Si duæ  
rectæ lineæ  
AB, CD  
habcant ad  
invicem ra-  
tionem da-

tam; & ab illis rectis lineæ quæcunque X, Y specie  
data describantur, habebunt ad invicem rationem  
datam.

Nam <sup>a</sup> fac Z simile ipsi Y. Ac ob <sup>b</sup> Z, <sup>c</sup> & Z <sup>a</sup> 18. 6.  
<sup>b</sup> 49. dat.  
datas, <sup>d</sup> liquet X dari. Q. E. D. <sup>c</sup> 50. dat.  
<sup>d</sup> 8. dat.

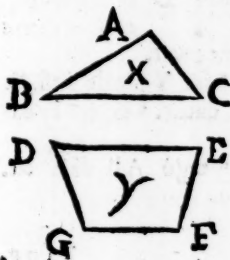
PROP. 52.



Si à data magnitudine rectæ  
AB figura X specie data descri-  
batur, descripta figura X ma-  
gnitudine data est.

Nam AB <sup>a</sup> datur specie, <sup>a</sup> 3. & 1.  
<sup>b</sup> 49. dat.  
& magnitudine; & <sup>b</sup> ABq datur. <sup>c</sup> ergò X datur. <sup>c</sup> 2. dat.

PROP. 53.

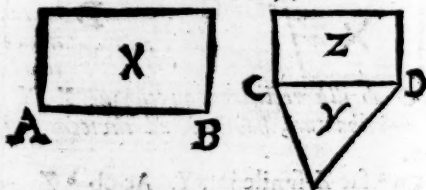


Si duæ figuræ X, Y  
specie data fuerint; & u-  
num latus unius BC ad u-  
num latus alterius DE ha-  
buerit rationem datam, reli-  
qua quoque latera AB ad  
reliqua FG habebunt rati-  
onem datam.

Nam

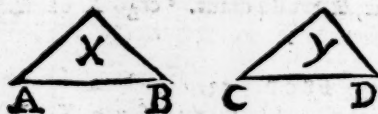
<sup>a</sup> 3. def. d.  
<sup>b</sup> hyp.

Nam  $\left\{ \begin{array}{l} \text{a} \overline{AB} \\ \text{b} \overline{BC} \\ \text{c} \overline{DE} \\ \text{d} \overline{EF} \\ \text{e} \overline{FG} \end{array} \right.$  dantur.  
&c. ergò per 8. dat.  
PROP. 54.



Si duæ figuræ X, Y specie datæ ad invicem habuerint rationem datam, etiam latera (AB, CD &c.) habebunt ad invicem rationem datam.

Nam ad  $\overline{CD}$  <sup>a</sup> fiat Z ipsi X similis. <sup>b</sup> Hæc specie datur. <sup>c</sup> ergò Y datur. Proinde ob  $\overline{Y}$  <sup>d</sup> datam, <sup>e</sup> datur  $\overline{X}$  <sup>f</sup> ergò  $\overline{AB}$  datur. ergò per præcedentem.  
PROP. 55.



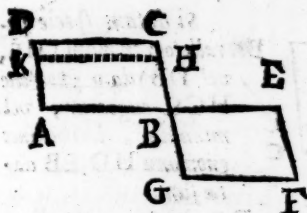
Si spatium X magnitudine & specie datum fuerit, ejus latera

(AB &c.) magnitudine data erunt.

Nam ad quamvis  $\overline{CD}$  <sup>a</sup> fac Y simile ipsi X. hoc specie, & magnitudine datur. <sup>b</sup> ergò Y datur. <sup>c</sup> quare  $\overline{CD}$  datur. <sup>d</sup> ergò AB data est.  
Q. E. D.

PROP.

PROP. 56.

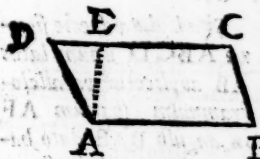


Si duo aquian-  
gula parallelogram-  
ma AC, BF habu-  
erint ad invicem ra-  
tionem datam, est  
ut primi latus AB  
ad secundi latus BE,  
itā reliquum secun-

di latus BG ad eam BH, ad quam alterum primi la-  
tus BC habet rationem datam, quam habet parallelo-  
grammum AC ad parallelogrammum BF.

Nam duc HK parall. AB. Liquerit esse BC. <sup>a</sup> 1. 6.  
BH <sup>a</sup> :: AC. AH <sup>b</sup> :: AC. BF. Q. E. D. <sup>b</sup> 14. 6.  
<sup>c</sup> 7. 5.

PROP. 57.



Si datum spatium AC  
ad datam rectam AB  
applicatum fuerit, in an-  
gulo BAD dato, datur  
applicationis altitudo AD

<sup>a</sup> Erige perpendi- <sup>a</sup> 11. 1.  
cularem AE. estque AB. AE <sup>b</sup> :: ABq. AB <sup>b</sup> 1. 6.  
AE <sup>c</sup> :: ABq. pgr. AC. <sup>d</sup> ergo AE datur. qua- <sup>c</sup> 35. 1.  
re per E duc parallelam DC, <sup>d</sup> 1. & 2.  
<sup>e</sup> hæc abscindet <sup>e</sup> 28. &  
quæsitam AD. Q. E. F. <sup>e</sup> 25. dat.

PROP. 58.

Si datum ad datam rectam applicetur, deficiens  
datâ specie figurâ, latitudines defectûs datæ sunt.

Non differt à vigesima octava sextæ.

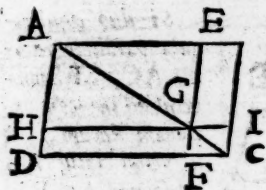
PROP. 59.

Si datum ad datam rectam applicetur, excedens  
datâ specie figurâ, latitudines excessûs datæ sunt.

Eadem est cum vigesima nona sextæ.

PROP.

## PROP. 60.



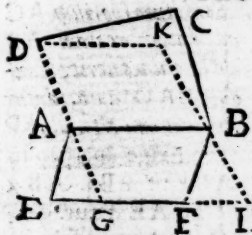
Si datum specie parallelogrammum (HE, vel DB) dato gnomone HCE augeatur, vel minuat, latitudines gnomonis HD, EB datae sunt.

a 3. dat.  
b 24.6.  
c 55. dat.  
d hyp.  
e 4. dat.

1. Hyp. Liqueat totum DB tam<sup>a</sup> magnitudine, quam<sup>b</sup> specie dari, & proinde & latitudines AB, AD; è quibus aufer<sup>d</sup> datas AE, AH, & manent EB, HD datæ. Q. E. D.

2. Hyp. Liqueat HE<sup>b</sup> specie, & magn. & dari, & quare & latera AE, AH; Hæc deme ex<sup>d</sup> datis AB, AD; & remanent EB, HD datæ. Q. E. D.

## PROP. 61.



Si ad datae specie figura ABCD unum latus AB applicetur parallelogrammum spatium AF in angulo BAE dato, habeat autem data figura AC ad parallelogrammum AF rationem datam, parallelogrammum AF specie datum est.

Ad DAG protractam duc (per B) parallelam, cui occurrant EFH, & DK parall. AB;

Ac ob  $\frac{AD}{AB}$ , & ang. BAD<sup>a</sup> dat. <sup>a</sup> liquet pgr.

a 3. def. d.  
b 49. dat.  
c 8. dat.  
d 35. 1.  
e 1. 6.  
f hyp. &  
g 40. dat.  
h 3. def. d.

AK specie dari. <sup>b</sup> ergò  $\frac{AK}{AC}$  & & proinde  $\frac{AK}{AF}$

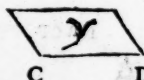
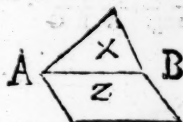
<sup>d</sup> vel  $\frac{AK}{AH}$ , hoc est  $\frac{AD}{AG}$  dantur. & ergò  $\frac{AB}{AG}$

tur. Item ob angulos E, & GAE<sup>f</sup> notos, & datur AE; ergò AB datur. <sup>b</sup> unde pgr. AF specie datur. Q. E. D.

## PROP.



PROP. 62.



Si due re-  
cta AB, CD  
ad invicem  
habeant ratio-  
nem datam,

et ab una quidem data specie figura X descripta sit,  
ab altera autem spatium parallelogrammum Y in an-  
gulo dato. Habeat autem figura X ad parallelogram-  
mum Y rationem datam, parallelogrammum Y specie  
datum est.

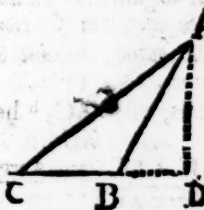
Nam ad AB sit pgr. Z simile ipsi Y. <sup>a</sup> Hujus <sup>a</sup> 50 dat.  
ratio ad Y, & <sup>b</sup> proinde ad X datur. <sup>c</sup> ejusque an- <sup>b</sup> 8. dat.  
guli dantur. <sup>d</sup> ergo Z specie datur. <sup>e</sup> proinde & <sup>c</sup> hyp.  
Y. Q. E. D. <sup>d</sup> 61. dat.  
<sup>e</sup> 3. def. d.

PROP. 63.

Si triangulum specie datum sit, quod ab unoquoq;  
lateralum describitur quadratum, ad triangulum habe-  
bit rationem datam.

Sequitur ex 49. hujus.

PROP. 64.



Si triangulum ABC an-  
gulum obtusum ABC da-  
tum habeat; illud spatium,  
quo latus AC obtusum an-  
gulum subtendens magis po-  
test quam latera AB, CB  
obtusum angulum ABC  
ambientia, ad triangulum

ABC habebit rationem datam.

Nam demittatur AD perpendicularis produ-  
cta CBD. atque ob angulos <sup>a</sup> ABD, & D <sup>a</sup> 4. dat.  
tos, <sup>b</sup> datur BD, <sup>c</sup> hoc est BD x CB, <sup>d</sup> ergo <sup>b</sup> 40 dat.  
<sup>c</sup> 1. 6.  
<sup>d</sup> 8. dat.

2 BD

e 12. 2.  $2 \overline{BD} \times \overline{CB}$ , hoc est,  $\frac{e}{f} \overline{ACq} - \overline{ABq} - \overline{CBq}$  da-  
 f 41. 1.  $\frac{1}{2} \overline{AD} \times \overline{BC}$  triang.  $\overline{ABC}$   
 tur. Q. E. D.

PROP. 65.



Si triangulum ACB  
 angulum acutum C da-  
 tum habeat; illud spati-  
 um, quo latus AB an-  
 gulum C subtendens  
 minus potest, quàm la-  
 tera AC, CB angulum  
 acutum C ambientia,

habebit ad triangulum ACB rationem datam.

a 40. dat. Nam duc perpendicularem AD. Datur  $\frac{a}{b} \overline{CD}$ ,  
 $\overline{AD}$

b 1. 6. hoc est  $\overline{CD} \times \overline{BC}$ , ergo  $\frac{b}{c} \overline{CD} \times \overline{BC}$ , hoc  
 c 8. dat.  $\frac{1}{2} \overline{AD} \times \overline{BC}$

d 13. 2. est  $\frac{d}{e} \overline{ACq} + \overline{BCq} - \overline{ABq}$  datur. Q. E. D.  
 e 41. 1. triang. ACB

PROP. 66.

Si triangulum ACB habuerit angulum C datum;  
 quod sub rectis AC, CB datum angulum C com-  
 prehendentibus, continetur rectangulum, habebit ad  
 triangulum ACB rationem datam.

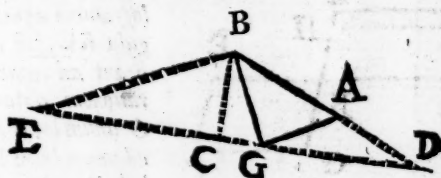
a 40. dat. Nam in figura præcedentis, est  $\frac{a}{b} \overline{AC}$ , hoc  
 b 1. 6.  $\overline{AD}$

c 41. 1. est,  $\overline{AC} \times \overline{BC}$ , hoc est  $\overline{AC} \times \overline{BC}$  data. ergo  
 d 8. dat.  $\frac{1}{2} \overline{AD} \times \overline{BC}$  triang. ACB

$\overline{AC} \times \overline{BC}$  datur. Q. E. D.  
 triang. ACB

PROP.

PROP. 67.



Si triangulum ABG habuerit datum angulum BAG; illud spatium, quo duo datum angulum BAG comprehendemia latera tanquam una recta BA + AG, plus possunt, quàm quadratum à reliquo latere BG, ad triangulum ABG habebit rationem datam.

Produc BA ità ut AD = AG. per B duc BE parall. AG; cui occurrat DGE. denique duc normalem BC.

Liquet ang. D <sup>a</sup> = AGD <sup>b</sup> = E, <sup>c</sup> quare BE = <sup>a</sup> 5. 1.  
 BD, ideóque EC = CD. <sup>e</sup> ergò EG x GD + <sup>b</sup> 29. 1.  
 CGq = CDq. proinde BDq <sup>f</sup> ( CDq + BCq ) <sup>c</sup> 6. 1.  
 = EG x GD + CGq + BCq = EG x GD <sup>d</sup> cor. 3. 3.  
 BGq. Jam ob angulos AGD, & D <sup>h</sup> subduplos <sup>e</sup> 5. 2.  
 dati BAG, liquet <sup>k</sup> AD, ideóq; ADq dari. Cùm <sup>f</sup> 47. 1.  
<sup>g</sup> 2. ax. 1.  
<sup>h</sup> 47. 1.  
 igitur BA x AD. ADq <sup>1</sup> :: BA. AD <sup>m</sup> :: EG. <sup>k</sup> 40. dat.  
 GD :: <sup>l</sup> 1. 8.  
 EG x GD :: ADq. GDq; <sup>n</sup> Erit BA x AD, <sup>o</sup> hoc <sup>m</sup> 2. 6.  
<sup>p</sup> 2. def. d.  
<sup>q</sup> 8. dat.  
 est BA x AG data. <sup>p</sup> Atqui BA x AG datur <sup>q</sup> er-  
<sup>EG x GD</sup>  
<sup>triang. AGB</sup>  
 gò EG x GD datur. Q. E. D.

PROP.



AC & <sup>a</sup> AB datas, <sup>e</sup> liquet KB dari. item ob <sup>b</sup> 35. 1.  
 $\overline{BH}$   $\overline{BE}$   $\overline{BC}$  <sup>c</sup> 68. d.  
 ang. G, & GBK <sup>d</sup> datos, <sup>e</sup> datur KB <sup>f</sup> quare BC <sup>d</sup> hyp. &  
 $\overline{BG}$   $\overline{BG}$  <sup>e</sup> 40. dat.  
 datur. Q. E. D. <sup>f</sup> 3. dat.

PROP. 70.

Si duorum parallelogrammorum ( AC, BH, vel BF ) circa æquales angulos ABC, KBE, aut circa inæquales quidem ( ABC, GBE ) datos tamen, latera ( AB, BE, & BC, BK, & BC, BG ) ad invicem habeant rationem datam, & ipsa parallelogramma ( AC, BH, & AC, BF ) habebunt ad invicem rationem datam.

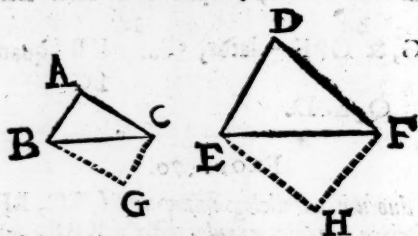
Nam ( in fig. præced. ) sit AB. BE :: KB. BL, & duc LM parall. BA.

Primò, Quia <sup>a</sup> AB <sup>b</sup> id est KB <sup>a</sup> ac KB data <sup>a</sup> hyp.  
 $\overline{BE}$ ,  $\overline{BL}$ ,  $\overline{CB}$  <sup>b</sup> const.  
 sunt, <sup>e</sup> erit CB, <sup>d</sup> hoc est AC <sup>e</sup> vel pgr. AC data. <sup>c</sup> 8. dat.  
 $\overline{BL}$   $\overline{AL}$   $\overline{BH}$  <sup>d</sup> 1. 6.  
 Q. E. D. <sup>e</sup> 14. 6.  
<sup>f</sup> hyp. &

Secundò. Ob angulos G, & GBK <sup>f</sup> datos, <sup>4.</sup> dat.  
 & datur BK item <sup>h</sup> CB data est. <sup>e</sup> ergò CB da- <sup>g</sup> 40. d.  
 $\overline{BG}$   $\overline{BG}$   $\overline{BK}$  <sup>h</sup> 35. 1.  
 tur. proinde, ut priùs, AC, hoc est pgr. AC da-  
 $\overline{BH}$   $\overline{BF}$   
 tur. Q. E. D.

PROP.

## PROP. 71.



Si duorum triangulorum  $ABC$ ,  $DEF$ , circa  $a$ -  
quales angulos, aut circa inæquales quidem, datos ta-  
men ( $A$ , &  $D$ ) latera  $AB$ ,  $DE$ , &  $AC$ ,  $DF$   
ad invicem habeant rationem datam, & ipsa trian-  
gula  $ABC$ ,  $DEF$  habebunt ad invicem rationem  
datam.

$a$  70. dat. Nam compleantur pgr<sup>a</sup>.  $AG$ ,  $DH$ .  $a$  hæc da-  
 $b$  15. 5. tam habent rationem;  $b$  proinde & trigona  $ABC$ ,  
 $c$  34. 1.  $DEF$  illorum  $c$  subdupla. Q. E. D.

## PROP. 72.



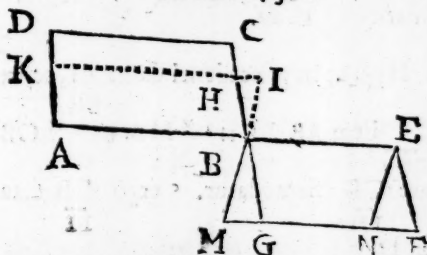
Si duorum triangulorum  $ABC$ ,  $DEF$  & bases  
 $BC$ ,  $EF$  fuerint in ratione data, & æta ab angu-  
lis ad bases ( $AG$ ,  $DH$ ), quæ faciant ang.  $AGC$ ,  
 $DHF$  æquales, aut inæquales quidem sed tamen da-  
tos, habeant ad invicem rationem datam, & ipsa tri-  
angula  $ABC$ ,  $DEF$  habebunt ad invicem rationem  
datam.

Nam duc  $BK$  ad  $AG$ , ac  $EM$  ad  $DH$  pa-  
rallelas, & comple pgr<sup>a</sup>.  $CK$ ,  $FM$ . Hæc se ha-  
bent juxta 70. hujus; quare triangula eorum  
\* subdupla  $ABC$ ,  $DEF$  rationem habent datam.  
Q. E. D.

\* 34. 1.

PROP.

PROP. 73.



Si duorum parallelogrammorum ( AC, BF, vel AC, BN ) circa æquales angulos, aut circa inæquales quidem, sed tamen datos, latera ad invicem ita se habeant, ut sit quemadmodum primi latus AB ad secundi latus BE, ita reliquum secundi latus ( BG, vel BM ) ad aliam aliquam rectam ( BH, vel BI ); habeat autem & reliquum primi latus BC ad eandem rectam ( BH vel BI ) rationem datam, & ipsa parallelogramma ( AC, BF, vel AC, BN ) habebunt ad invicem rationem datam.

Nam 1. Hyp. liquet <sup>a</sup> CB <sup>b</sup> id est AC da- <sup>a</sup> hyp. <sup>b</sup> 2. 6. <sup>c</sup> 14. 6.   
 BH, AH<sup>c</sup> (BF)

ri. Q. E. D.

2. Hyp. Duc parallelam IHK. <sup>a</sup> Liquet an- <sup>a</sup> hyp. <sup>b</sup> 4. dat. <sup>c</sup> 40. dat. <sup>d</sup> 8. dat. <sup>e</sup> 35. 1.   
 gulos IBH ( GBM ) & BHI ( A. H ) dari.   
 <sup>b</sup> ergo BH datur. item CB <sup>a</sup> data est. <sup>c</sup> proinde

BI BI   
 CB hoc est pgr. AC <sup>d</sup> vel AC datur. Q. E. D.   
 BH BF BN,

PROP. 74.

Si duo parallelogramma datam rationem habeant, aut in æqualibus angulis ( ut AC, BF ) aut inæqualibus quidem, sed tamen datis ( ut AC, BN ); erit ut primi latus AB ad secundi latus BE; ita alterum secundi latus ( BG, vel BM ) ad eam ( BH, vel BI ) ad quam reliquum primi latus BC rationem habet datam.

C 2

Nam

a 56. dat. Nam in fig. præcedentis. 1. Hyp. <sup>a</sup> Liqueat  
CB dari. Q. E. D.

$\overline{BH}$

2. Hyp. ut in præcedenti datur  $\overline{BI}$ , ac ex hyp.

$\overline{BH}$

\* hyp. AC item AB. BE :: <sup>a</sup> \* MB. BI <sup>b</sup> :: GB. BH.

b 4. 6.

$\overline{BF}(\overline{BN})$

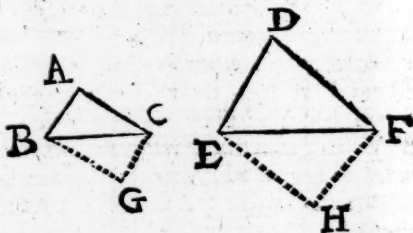
c 8. dat. <sup>a</sup> quare CB etiam datur. <sup>c</sup> ergò CB data est.

$\overline{BH}$

$\overline{BI}$

Q. E. D.

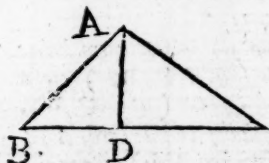
PROP. 75.



Si duo triangula ABC, DEF ad invicem habeant rationem datam, aut in angulis (A, D) æqualibus, aut inæqualibus quidem sed tamen datis, erit ut primi latus AB ad secundi latus DE, ita alterum secundi latus DF ad eam rectam, ad quam reliquum primi latus AC habet rationem datam.

Nam compleantur pgr. AG, DH. Ergò per præcedentem.

PROP. 76.



Si à trianguli ABC specie dati vertice A linea perpendicularis AD agatur ad basim BC, acta linea AD ad

\* hyp. &  
3. def. d.

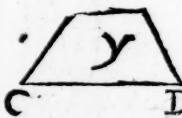
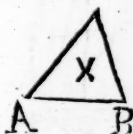
basim BC habebit rationem datam.

Nam ob angulos, \* B, & ADB datos, <sup>a</sup> datur AB.



AB <sup>a</sup> item AB datur. <sup>b</sup> Ergò AD datur. <sup>a</sup> 40. dat.  
 $\frac{AD}{BC}$   $\frac{BC}{BC}$  <sup>b</sup> 8. dat.  
 Q. E. D.

PROP. 77.

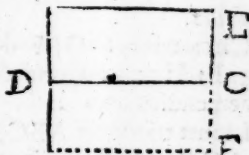


Si datae fi-  
 gurae Specie X,  
 Y ad invicem  
 habeant ratio-  
 nem datam, &

quodlibet latus unius AB ad quodlibet alterius latus  
 CD habebit rationem datam.

Nam <sup>a</sup> ABq, & <sup>b</sup> Y, ac <sup>c</sup> proinde ABq datur, <sup>a</sup> 49. dat.  
 $\frac{AB}{Y}$   $\frac{Y}{Y}$  <sup>b</sup> hyp.  
 item CDq datur. <sup>c</sup> ergò ABq, ac ideò AB da- <sup>c</sup> 8. dat.  
 $\frac{AB}{Y}$   $\frac{CDq}{CD}$   
 tur. Q. E. D.

PROP. 78.



Si data figura specie X ad aliquod rectangulum  
 DCE habeat rationem datam, habeat autem & unum  
 latus AB ad unum latus DC rationem datam, re-  
 ctangulum DCE specie datum est.

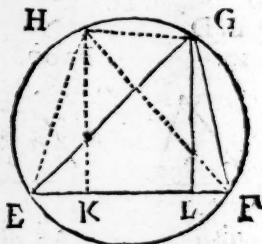
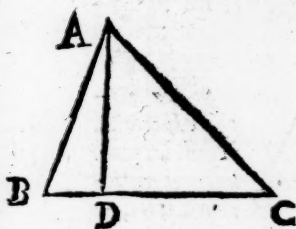
Sit DC. AB :: AB. CF <sup>a</sup> ergò DC datur. <sup>a</sup> 8. dat.  
 $\frac{DC}{CF}$  <sup>b</sup> 49. dat.

Item ob <sup>b</sup> X & <sup>c</sup> X datas, <sup>a</sup> erit ABq, <sup>d</sup> hoc est <sup>c</sup> hyp.  
 $\frac{ABq}{DC^2}$   $\frac{DC^2}{DC^2}$  <sup>d</sup> 17.6.

DC x CF, vel <sup>c</sup> CF data, proinde <sup>a</sup> DC datur. <sup>c</sup> 1. 6.  
 $\frac{DC}{CF}$   $\frac{CF}{CF}$   $\frac{DC}{CF}$

quare rectang. DCE specie datur. Q. E. D. <sup>f</sup> 3. def. d.

## PROP. 79.



Si duo trian̄gula ABC, GEF unum angulum BAC uni angulo EGF æqualem habeant, ab æqualibus autem angulis BAC, EGF ad bases BC, EF perpendiculares agantur AD, GL, sitque ut primi trian̄guli basis ad perpendicularem, ita & alterius trian̄guli basis ad perpendicularem (BC. AD :: EF. GL.); illa trian̄gula ABC, EGF æquian̄gula sunt.

Circa trian̄g. GEF describe circulum. Fac ang. FEH = B. Connecte HF, HG; & demitte perpendicularem HK.

Liquet trian̄gula ABC, HEF, & ABD, HEK, ac ACD, HFK æquian̄gula fore. Proinde EK. KH :: BD. DA.<sup>a</sup> & FK. KH :: CD. DA.<sup>b</sup> quare EF. KH :: BC. DA ::<sup>c</sup> EF. LG.<sup>d</sup> quare KH = LG.<sup>e</sup> ergò HG parall. KL.<sup>f</sup> unde ang. EGH = GEF.<sup>g</sup> ergò arcus EH, FG, <sup>h</sup> ideòque anguli EFH, GEF æquantur.<sup>k</sup> Item ang. EHF = EGF.<sup>l</sup> ergò trigona EHF, EGF; <sup>m</sup> proinde & trigona EGF, ABC sibi mutuò æquian̄gula sunt. Q. E. D.

a 4. 6.  
b 24. 5.  
c hyp.  
d 9. 5.  
e 33. 1.  
f 29. 1.  
g 26. 3.  
h 27. 3.  
k 21. 3.  
l 33. 2.  
m 21. 6.

PROP.

PROP. 80.



Si triangulum ABC unum angulum A datum habuerit; quod autem sub lateribus AB, AC datum angulum comprehendentibus continetur rectangulum,

habeat ad quadratum reliqui lateris BC rationem datam, triangulum ABC specie datum est.

Nam Q:  $\frac{AC}{\text{triang. ABC}} + \frac{AB}{\text{triang. ABC}} = \frac{CBq}{\text{triang. ABC}}$  vocetur X. a 67. dat. ergo X; b &  $\frac{AC \times AB}{\text{triang. ABC}}$ ; & c propterea b 66. dat. c 8. dat.

X data est. d item  $\frac{AC \times AB}{\text{triang. ABC}}$  datur. e ergo d hyp.

$\frac{AC \times AB}{\text{triang. ABC}} = \frac{CBq}{\text{triang. ABC}}$  X e idcoq,  $\frac{X}{\text{triang. ABC}} + \frac{CBq}{\text{triang. ABC}}$ , f hoc est Q:  $\frac{AC + AB}{\text{triang. ABC}}$ , e 6. dat. f hyp.

datur. g proinde triang. ABC specie datur. Q. E. D. g 46. dat.

PROP. 81.

A. Si tres recte proportionales  
B. A, B, C tribus rectis proportionibus  
C. D, E, F extremas  
A, D, & C, F habuerint in  
atione data; medias quoque B, E habebunt in ratione  
data. Et si extrema A ad extremam D, & media  
B ad mediam E habeat rationem datam; & reliqua  
C ad reliquam F habebit rationem datam.

Nam primò, ob A & C datas, a datur  $\frac{AC}{D \times F}$ , a 70. dat. b 17. 6.

b hoc est,  $\frac{Bq}{E}$  ergo B datur. Q. E. D.

Secundò, ob c  $\frac{Bq}{E}$ , b hoc est  $\frac{AC}{D \times F}$  datam, & c  $\frac{A}{D}$  c hyp. datam, datur  $\frac{C}{F}$ . Q. E. D. d 68. dat.

**Euclidis Data.**

PROP. 82.

A. B :: D. E.

B. C :: E. F.

a hyp.

b 2. def. d.

Si quatuor recte proportionales fuerint (A.B::D.E) erit ut prima A ad eam C, ad quam secunda B rationem habet datam; ita tertia D ad eam F, ad quam quarta E rationem habet datam.

Nam quia B. C :: <sup>a</sup> E. F. & <sup>a</sup> B data est; <sup>b</sup> c-rit E data, atqui ex æquali A. C :: D. F. ergo, &c.

PROP. 83.

A. B. C. D.  
F. E.

Si quatuor recte A, B, C, D ita ad invicem se habeant, ut tribus ex iis quibuscunque

sumptis A, B, C; & quartâ ipsis proportionali acceptâ E, ad quam reliqua D ex quatuor rectis proportionem habet datam, erit ut quarta D ad tertiam C, ita secunda B ad eam F, ad quam habet prima A rationem datam.

a 16. 6.

b hyp.

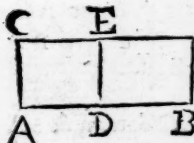
c 1. 6.

d 7. 5.

Nam AE <sup>a</sup> = BC <sup>b</sup> = DF. & datur <sup>b</sup> D, <sup>E</sup>

hoc est AD, <sup>d</sup> vel AD, <sup>e</sup> vel A. ergo, &c.

PROP. 84.



Si due recte AB, AC datum spatium comprehendant in angulo A dato; sit autem altera AB alterâ AC major datâ DB, etiam unaquæque ipsarum AB, AC data erit.

a 3 def. d.

b hyp.

c 59. d.

d 3. dat.

Nam comple quadratum AE. <sup>a</sup> Hoc specie datum est. <sup>b</sup> item pgr. CB, & recta DB dantur. <sup>c</sup> ergo AC, vel AD, & tota <sup>d</sup> proinde AB datur. Q. E. D.

PROP.

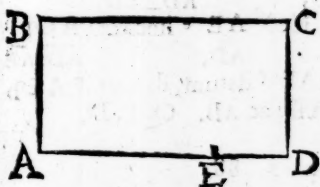
PROP. 85.

Si dua rectæ ED, DE datum spatium comprehendant in angulo BDE dato, sit autem simul utraq; (BD+DE) data; & earum quoque unaquæque BD, & DE data erit.

Nam sume DA=DE, & comple quad. DC. Hoc specie datur; item pgr. BE, & recta BA<sup>a</sup> dantur, b ergò AD, (DE) & reliqua DB dantur. Q. E. D.

a hyp.  
b 58. dat.  
c 4. dat.

PROP. 86.



Si dua rectæ AB, AD datum spatium BD comprehendant in angulo dato; quadratum autem unius AD quadrato alterius

AB majus sit dato quàm in ratione (nempe ut sit ADxAE datum, & \* reliqui ADxED ad \* 2. 2. ABq ratio data) & utraque ipsarum AB, AD data erit.

Nam ob BD, & DAxAE<sup>a</sup> data, b datur a hyp.  
BD<sup>c</sup> ergò AB<sup>d</sup> ideóque ABq datur. e item b 1. dat.  
DAxAE AE AEq c 69. dat.  
ABq datur. f ergò AEq f ideóque, AEq d 51. dat.;  
ADxED, ADxED, 4 ADxED, e hyp.  
f 8. dat.  
f & AEq h hoc est AEq datur. g 6. dat.  
4 ADxED AEq, Q AD+ED h 8. 2.  
k ergò AE & l componendo AE \* ideóq; k 54. dat.  
AD+ED; 2 AD, l 6. dat.  
AE m hoc est AEq datur. denique igitur ob m 1. 6.  
AD, ADxAE  
e datum ADxAE, n erit AEq data. o ergò AE, n 2. dat.  
& p proinde AD, ac AB datae sunt. Q. E. D. o 55. dat.  
p 57. dat.

PROP.

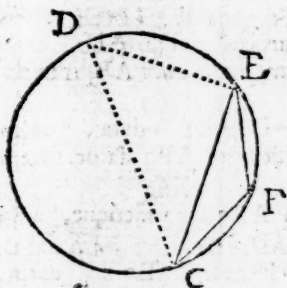
## PROP. 87.

Si duæ rectæ AB, AD datum spatium comprehendant in angulo dato, quadratum autem unius AD quadrato alterius AB majus sit dato ( $AD \times AE$ ), earum utraque AB, AD data erit.

a 2 dat.  
b 69. dat.  
c hyp. &  
1. 2.  
d 8. &  
6. dat.  
e 8. 2.  
d 6. dat.  
e 1. 6.  
hyp.  
f 2. dat.  
h 55. dat.  
i 57. dat.

Nam ob  $BA \times AE$  <sup>a</sup> datum, <sup>b</sup> erit AE ideóque  $\frac{AB}{BD}$ ,  $\frac{AE}{AB}$ ,  
 $AEq$  <sup>c</sup> hoc est  $AEq$  <sup>d</sup> ac ideócircò  $AEq$   
 $\frac{ABq}{AD \times ED}$ ,  $\frac{AEq}{AD \times ED}$ ,  $\frac{AEq}{AD \times ED}$  <sup>e</sup>  $\frac{AD \times AE}{AD \times ED}$ ,  
<sup>e</sup> hoc est  $AEq$  ac proinde AE <sup>f</sup> & <sup>d</sup> com-  
 $\frac{Q \cdot AD \times ED}{AD \times ED}$ ,  $\frac{AD \times ED}{AD \times ED}$ ,  
ponendo AE <sup>g</sup> ac ideó AE <sup>h</sup> hoc est  $AEq$   
<sup>i</sup>  $\frac{AD}{AD}$ ,  $\frac{AD}{AD}$ ,  $\frac{AD \times AE}{AD \times AE}$   
data, ergò ob  $AD \times AE$  <sup>i</sup> datum, dantur <sup>g</sup>  $AEq$ ,  
& <sup>h</sup> AE, ac <sup>k</sup> ideó AD, ac AB. Q. E. D.

## PROP. 88.



Si in circulum CFED magnitudi-  
ne datum acta sit re-  
cta linea CE, que  
segmentum auferat,  
quod datum angulum  
F comprehendat, acta  
recta linea CE ma-  
gnitudine data est.

Nam ducatur di-  
ameter CD; & con-

a hyp.  
b 4. dat.  
c 40. dat.  
d hyp. &  
5. def. d.  
e 2. dat.

nectatur ED. Ac. ob ang. F <sup>a</sup> datum, <sup>b</sup> erit ang.  
D ( reliquus è 2 rectis ) datus. item rectus CED  
datur. <sup>c</sup> quare CE datur. ergò ob <sup>d</sup> datam CD,  
 $\frac{CD}{CD}$   
<sup>e</sup> erit CE data. Q. E. D.

PROP.

PROP. 89.

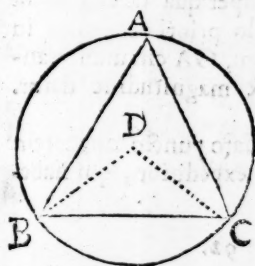
Si in datum magnitudine circulum CFED data magnitudine recta CE acta fuerit, auferet segmentum, quod angulum (CFE) datum comprehendet.

Nam (in fig. præcedentis quia  $\overline{CE}$ , & ang.  $\overline{CD}$

CED dantur, <sup>a</sup> erit ang. D datus. <sup>b</sup> ergo ang. F <sup>a</sup> 43. dat. <sup>b</sup> 4. dat. <sup>c</sup> 22. 3.

(1 Rect. — D) datus erit. Q. E. D.

PROP. 90.



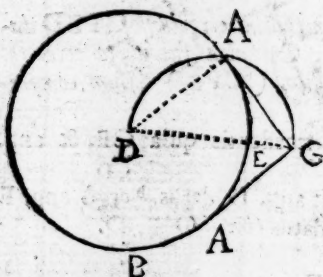
Si in circuli positione dati circumferentia BAC datum fuerit punctum B, ab eo autem puncto B ad circumferentiam circuli inflexa fuerit recta BAC quæ datum angulum A efficiat, inflexæ rectæ altera extremitas C data erit.

Ad a centrum D duc BD, & CD; <sup>b</sup> datúsq; a 1. 3. est ang. D dati A <sup>c</sup> duplus. quare ob BD; <sup>d</sup> datam, <sup>e</sup> erit DC data. <sup>f</sup> ergo punctum C datum est. Q. E. D. <sup>c</sup> 20. 3. <sup>d</sup> 26. dat. <sup>e</sup> 29. dat. <sup>f</sup> sch. 25. d.

Si ang. A obtusus fuerit; sume reliquum è 2 rectis acutum; ejus subsidio punctum C inuenies, juxta dicta.

PROP.

## PROP. 91.



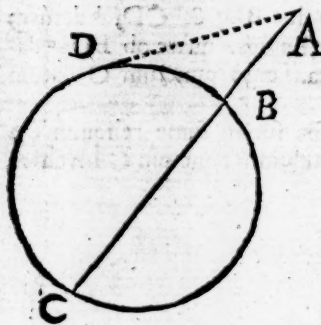
Si à dato puncto  
G acta fuerit re-  
cta GA, quæ da-  
tum positione circuli  
BEA contin-  
gat, acta linea GA  
positione, & ma-  
gnitudine data est.

Nam centrum  
D, & punctum

G connectat recta DG. super qua descriptus sit  
semicirculus DAG circulo priori occurrens in  
A. Ob ang.  $DAG$  rectum, GA circulum tan-  
git. c ergò GA situ, & magnitudine datur.  
Q. E. D.

Hinc modus discitur à dato puncto tangentem  
ducendi eo nonnunquam expeditior, qui habe-  
tur ad 17. 3.

## PROP. 92.



Si extra circu-  
lum positione da-  
tum BCD accipi-  
atur aliquod pun-  
ctum A, à dato  
puncto A  
in circulum pro-  
ducatur quædam  
recta AC; datum  
est id quod sub a-  
cta linea AC, &  
eâ AB, quæ inter  
punctum A &

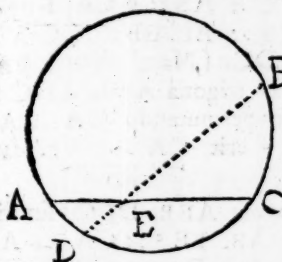
convexam peripheriam B comprehenditur rectangu-  
lum CAB.

Nam



<sup>b</sup>Nam duc tangentem AD, <sup>a</sup> eritque ADq<sup>a</sup> 91. dat.  
( hoc est CA x AB ) datum. Q. E. D. <sup>b</sup> 36. 3.

PROP. 93.

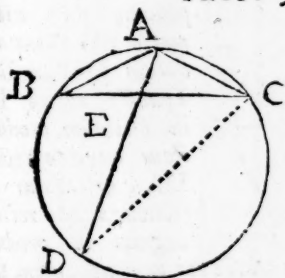


Si intra datum  
positione circulum  
ABCD, sumatur  
aliquod punctum E.  
per punctum autem  
E agatur in circulo  
aliqua recta  
AFC; quod sub  
segmentis AE, EC  
acta recta linea,

comprehenditur rectangulum, datum est.

Nam per E duc rectam DEB utcumque occurrentem circulo in B, & D. estque rectang.  
DEB = <sup>a</sup> AEC. <sup>b</sup> ergo AEC datur. Q. E. D. <sup>a</sup> 35. 3.  
<sup>b</sup> 1. def. d1

PROP. 94.



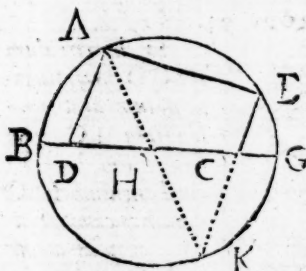
Si in circulum  
BACD magnitudi-  
ne datum agatur re-  
cta linea BC, quæ  
segmentum auferat,  
quod angulum BAC  
datum compren-  
dat, angulus autem  
BAC; qui in se-  
gmento consistit, bi-

fariam secetur; simul utraque rectarum BA, AC  
quæ angulum datum BAC comprehendunt, ad lineam  
AD, quæ angulum bifariam secat, habebit rationem  
datam, & quod sub simul utrisq; BA, AC, quæ datum  
angulum BAC comprehendunt, rectis, & inferne ab-  
scissâ ( ED ) ab ea AD, quæ angulum BAC in  
circumferentia datum bifariam secat, rectangulum da-  
tum erit.

Duc

- Duc CD; & primò ob angulos BAC, CAD  
 a 88. dat. datos, <sup>a</sup> dantur subtensæ BC, CD, \* ideoque CB  
 \* 1. dat.  $\overline{DC}$   
 b 3. 6. datur. Cùm igitur CA. AB :: b CE. EB, &  
 c 12. 5. permutando CA. CE :: AB. EB :: (CA +  
 \* 4. 6. AB. CB ::) \* AD. DC. (Nam\* ob ang. BAE  
 d 2. def. d. = CAD; & D = BD trigona ABE, ADC si-  
 milia sunt) ac rursus permutando CA + AB.  
 AD :: CB. DC. <sup>d</sup> erit  $\frac{CA + AB}{AD}$  data.  
 Q. E. D.  
 e 21. 3. Secundò, ob triangua AEB, DEC e similia;  
 b 4. 6. <sup>b</sup> erit CD. DE :: AB. BE e :: CA. + AB.  
 c prius. CB. <sup>d</sup> ergò CA + AB in DE = CD in CB.  
 d 16. 6. CB. <sup>d</sup> ergò CA + AB in DE = CD in CB.  
 e 52. dat. atqui CD x CB e datur. <sup>f</sup> ergò CA + AB in  
 f 1. def. d. DE datum est. Q. E. D.

## PROP. 95.



Si in circuli BAG  
 positione dati dia-  
 metro BG sumatur  
 datum punctum D,  
 à puncto autem D  
 in circulum produ-  
 catur quadam recta  
 DA, & agatur à  
 sectione A ad rectos  
 angulos in produ-  
 ctam rectam DA linea AE; per punctum autem E,  
 in quo linea AE, quæ ad rectos angulos consistit, oc-  
 currit circumferentiæ circuli agatur parallela (ECK)  
 productæ rectæ DA; datum est illud punctum C, in  
 quo parallela EK occurrit ipsi diametro BG; & quod  
 sub parallelis lineis AD, EC comprehendatur rect-  
 angulum, datum est.

- a 31. 3. Nam connectatur AK. <sup>a</sup> estque AK (ob an-  
 gulum E, vel DAE rectum) diameter. ergò in-

intersectio H est centrum. <sup>b</sup> ergò DH datur. <sup>b</sup> 26. dat.  
 Atqui ob KH. HA <sup>c</sup> :: CH. HD, <sup>d</sup> est CH <sup>c</sup> 4. 6.  
 = HD, <sup>e</sup> ergò CH datur. <sup>f</sup> ergò punctum C <sup>e</sup> 1. def. d.  
 datur. Q. E. D. <sup>g</sup> ergò KC x CE, hoc est <sup>f</sup> 27. dat.  
<sup>d</sup> AD x CE datur. Q. E. D. <sup>g</sup> 93. dat.

**FINIS.**

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**Annotationes in Elementa Euclidis**  
 nuper edita, in quibus, obscura illustrantur, errata emendantur, plurimæque quæ conducant ad Geometriæ rudimenta facilius percipienda adjiciuntur.

pag. 13. lin. 5. scribe, Rursus ang.  $ACD \overset{e}{=} ADC$ ; & ang.  $BCD \overset{f}{=} BDC$  ergo ang.  $ACD \overset{f}{=} BDC$ , id est ang.  $ADC \overset{f}{=} BDC$ . Q. F. N. e 5. 1.  
f 9. ax.

p. 17. l. ult. scribe, conjunganturque FC, IC, & producat AC.

p. 18. l. 3. scribe; simili argumento ang.  $ICH \overset{f}{=} ABH$ . ergo totus  $ACD \overset{f}{=} (BCG)$  & major est utroque CAB, & ABC. Q. E. D.

p. 21. apponantur figuræ quæ desunt.

p. 40. lin. 18. scribe, Schol.

*Imò si fuerint duæ rectæ, secanturque ambæ in quotcunque partes, idem provenit ex ductu totius in totum, & partium in partes.*

Nam sit  $Z = A + B + C$ , &  $Y = D + E$ ; quia  $DZ^a = DA + DB + DC$ , &  $EZ^a = EA + EB + EC$ , &  $YZ^a = DZ + EZ$ , <sup>b</sup> erit  $ZY = DA + DB + DC + EA + EB + EC$ . Q. E. D. a 1. 2.  
b 2. ax.

*Hinc patet ratio ducendi rectas compositas in compositas. Nam omnia partium rectangula accipere oportet, & habetur rectangulum ex totis.*

Sin linearum, in se ducendarum signis + admisceantur signa —, etiam signorum ratio habenda est. Quippe ex + in — provenit —; at ex — in — provenit +. Nam sit +A ducenda in E—C. & quoniam +A non affirmatur de toto B, sed de ejus parte tantum, quâ superat C, debet AC manere negata. quare prodibit AB—AC. Vel sic; quia B constat partibus C, & B—C, \* erit AB \* 1. 2.  
D                      = AC

$=AC + A \text{ in } B - C$ ; aufer utrinque  $AC$ , erit  $AB - AC = A \text{ in } B - C$ . Similiter si  $-A$  ducenda sit in  $B - C$ , quoniam ex vi signi  $-$  non negatur  $A$  de toto  $B$ , sed de ejus solummodo excessu supra  $C$ , debet  $AC$  manere affirmata. proveniet ergo  $-AB + AC$ . Vel sic; quia  $AB^* = AC + A \text{ in } B - C$ ; tolle utrinque omnia, erit  $-AB = AC - A \text{ in } B + C$ ; adde  $AC$  utrinque, eritque  $-AB + AC = A \text{ in } B - C$ .

Atque ex his ritè perspectis, quæ subsequuntur 9 propositiones, aliæque ejusmodi innumeræ, ex linearum in se ductarum comparatione emergentes ( quas apud Vietam, & alios Analyistas in numero habes ) nullo negotio demonstrantur, rem plerumque quasi ad simplicem calculum exigendo.

\* 19. ar. Porro \* liquet productum ex quapiam magnitudine in numeri cujuslibet partes æquari producto ex eadem in totum numerum. Ut  $5 A + 7 A = 12 A$ . &  $4 A \text{ in } 5 A + 4 A \text{ in } 7 A = 4 A \text{ in } 12 A$ . quare quæ in hoc loco de rectorum in se ductu dicta sunt, eadem de numerorum in se multiplicatione intelligi possunt. proinde etiam quæ in 9 sequentibus theorematibus de lineis affirmantur, eadem valent de numeris accepta; quippe cum istæ omnes ab hac prima immediate dependeant, & deducantur.

p. 42. inter demonstr. & Schol. propositionis quintæ, scribe.

*Hoc theorema paulò aliter effertur, & faciliùs demonstratur, sic Rectangulum ex summa & differentia duarum rectorum  $A, E$ , æquatur differentia ex ipsis.*

\* sch. 1. 2. Nam si  $A + E$  ducatur in  $A - E$  \* provenit  $Aq - AE + EA - Eq = Aq - Eq$ . Q. E. D.

p. 44. post demonstrationem prop. 9. scribe,  
Aliter effertur & faciliùs demonstratur, sic

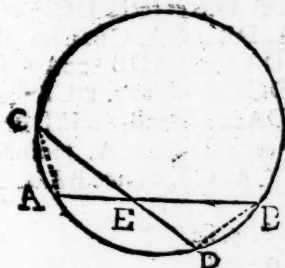
*Aggregatum*

*Aggregatum quadratorum ex summa, & differentia duarum rectarum A, E æquatur duplo quadratorum ex ipsis.*

Nam  $Q: A + E^2 = Aq + Eq + 2AE$ . & <sup>a</sup> 4. 2.

$Q: A - E^2 = Aq + Eq - 2AE$ . Hæc collecta <sup>b</sup> sch. 7. 2. faciunt  $2Aq + 2Eq$ . Q. E. D.

p. 67. post demonstrationem prop. 28. scribe; Quod si subtrinsa AC  $\square$  vel  $\rhd$  DF, erit simili modo arcus AC  $\square$ , vel  $\rhd$  DF.



p. 71. post demonstrationem prop. 35. scribe, Facilius sic, &

universaliter; connecte AC, & BD.

atque ob angulos <sup>a</sup> CEA, DEB, <sup>b</sup> bip-

sosque C, B (super <sup>b</sup> 21. 3.

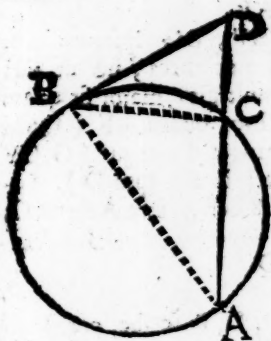
eodem arcu AD)

pares, trigona CEA,

BED <sup>c</sup> æquiangula sunt. <sup>d</sup> ergo CE.EA :: EB. <sup>c</sup> cor. 32. 1.

ED. <sup>e</sup> proinde CE x ED = EA x EB. Q. E. D. <sup>d</sup> 4. 6.

Quæ ex sexto libro citantur tam hîc, quàm in sequenti, ab hac minimè pendent, quare iis uti licuit. <sup>e</sup> 16. 6.



p. 72. Inter de monstr. & coroll.

prop. 36 scribe, Facilius ac universaliter sic

Duc AB, & BC.

Ac ob angulos A,

DBC <sup>a</sup> pares, & D <sup>a</sup> 32. 3.

communem, trian- <sup>b</sup> 32. 1.

gula BDC, ADB <sup>c</sup> 4. 6.

<sup>b</sup> æquiangula sunt. <sup>d</sup> 17. 6.

<sup>c</sup> ergo AD. DB ::

DB. DC. <sup>d</sup> quare AD x DC = DBq. Q. E. D.

D 2

p. 76:



p. 76. ad def. 7. 4. substitue figuram hanc.

pag. 82. post demonstrationem propos. 10. 4. scribe sic,



a 3. 6.

b constr.

c hyp.

d 6. 1.

e 31. 1.

f 2. ax.

g 17. 6.

Hæc constructio Analyticè indagatur sic; Factum sit, & angulum BDA bisecet recta DC. <sup>a</sup> ergò DA. DB :: CA. CB. item ob ang. CDA <sup>b</sup> =  $\frac{1}{2}$  ADB <sup>c</sup> = A, <sup>d</sup> est CA = DC. ac ob ang. DCB <sup>e</sup> = A + CDA = 2A <sup>e</sup> = B, <sup>d</sup> erit DB = DC, <sup>f</sup> ergò DB = CA. proinde

DA. ( <sup>e</sup> BA ) CA :: CA. CB. & unde BA x CB = CAq.

p. 98. scribe Prop. 8. 5. sic.

PROP. 8.

Inæqualium magnitudinum AB, AC major AB ad eandem D majorem habet rationem, quàm minor AC: & eadem D ad minorem AC majorem rationem habet, quàm ad majorem AB.

Sume EF, EG ipsarum AB, AC æquemultiplices, ità ut EH ipsius D multiplex, major sit quàm EG, at minor quàm EF ( Quod facile continget, si utraq; EG, GF majores accipiantur ipsâ D ). Liqueat juxta 8 def. 5. fore  $\frac{AB}{D} < \frac{AC}{D}$ ;

ac  $\frac{D}{AB} > \frac{D}{AC}$  Quæ E. D.

b hyp.

c 6. def. 5.

p. 100. lin. ult. post B, D, F scribe, porro ob

A. B <sup>b</sup> :: C. D <sup>b</sup> :: E. F, si G  $\square$ , =,  $\sqsupset$  K, erit similiter



similiter  $H \square, \equiv, \neg L$ ; &  $I \square, \equiv, \neg M$ ; ac  
proinde si  $G \square, \equiv, \neg K$ , erit simili modo  $G + H$   
 $+ I \square, \equiv, \neg K + L + M$ . <sup>c</sup> quare  $A. B :: A +$   
 $C + E. B + D + F. Q. E. D.$

pag. 102. circa 23. lin. post (æquatur) scribe:  
ergò, quum  $AG. DH :: C. F :: GB. HE$ . erit,  
&c. ut sequitur ibi.

p. 104. lin. 1. post KO scribe; itaque ablati  
hinc inde communibus HL, KM &c. ut ibi se-  
quitur.

p. 111. l. 12. dele, Hujusce demonstratio &c.  
& scribe, Intellige  $G \equiv DE$ . <sup>a</sup> ergò  $B \square G$ . <sup>b</sup> ergò <sup>a</sup> 10 5.  
<sup>b</sup> 8. 5.

$A \square A$ . Rursus concipe  $H \equiv E$ . <sup>c</sup> ergò  $H \neg A$ . <sup>c</sup> sch 13.5  
 $\overline{G} \quad \overline{B} \quad \overline{G} \quad \overline{F} \quad \overline{G} \quad \overline{G}$   
<sup>a</sup> quare  $A \square H$ . <sup>b</sup> proinde  $A \square H$  <sup>d</sup> vel D. Q.E.D. <sup>d</sup> 23. 5.

p. 114. circa 25. lin. dele, cum igitur, & scri-  
be, Verum si HC &c. ut sequitur.

p. 116. l. 2. dele inò si plures, &c. & scribe sic.

Schol.

Imò si plures DE, FG  
ad unum latus BC paral-  
lela fuerint, erunt omnia  
laterum segmenta propor-  
tionalia.

Nam DF. FA <sup>a</sup> ::  
EG. GA; & compo-  
nendo, invertendóque  
FA. DA :: GA. EA;  
<sup>a</sup> ac DA. DB :: EA. <sup>a</sup> 2. 6.  
EC. ergò ex æquo DF. DB :: EG. EC. Q.E.D.

Coroll.

Si DF. DB :: EG. EC; <sup>a</sup> erunt BC, DE, FG  
parallelæ.

p. 119. prop. 8. démonstretur sic.

D 3

Nam

<sup>a</sup> hyp. Nam ob angulos BAC, ADB<sup>2</sup> rectos, <sup>b</sup> ide6q;  
<sup>b</sup> 12. ax. æquales, & B communem, trigona BAC, ADB  
<sup>c</sup> 32. & <sup>c</sup> similia sunt. Simili discursu, similia sunt trian-  
<sup>d</sup> 6. gula BAC, ADG. <sup>d</sup> proinde ADB, ADC si-  
<sup>d</sup> vid. 21. 6 milia erunt. Q. E. D.

Coroll. &c. ut sequitur.

pag. 121. lin. antepen. scribe, Vel sic, Dataz  
 sint AB, BC; ex quibus fac angulum rectum  
<sup>a</sup> cor. 8. 6. ABC. duc AC, & huic normalem CD, cui oc-  
 currat AB protracta in D. <sup>a</sup> estque AB. BC ::  
 BC. BD.

pag. 122. dele figuram istam furciferam.  
 ibid. lin. 6. dele, vel ita; CD = CB. & quæ  
 seq. cum sua figura.

pag. 123. post lin. 3. scribe, vel ( in eadem fi-  
 gara ) sint AB, BF duæ datæ, <sup>b</sup> liquet esse AB:  
 BF :: BF. BE..

pag. 130. lin. antepenuit. dele, sic quidem P.  
 Herigonius scrire, sed facillimè, &c. & scribe sic,  
<sup>a</sup> 1. 6. Vel sic; sit  $Z = A + E$ . liquet esse Aq. AE :: <sup>a</sup> A.  
 E :: <sup>a</sup> AE. Eq. item Zq. ZA :: <sup>a</sup> Z. A. :: <sup>a</sup> ZA.  
 Aq. & Zq. ZE :: <sup>a</sup> Z. E :: ZE. Eq.

p. 136. Propos. 31. <sup>a</sup> demonstretur sic.

<sup>a</sup> cor. 8. 6. Ab angulo recto. BAC demitte perpendiculara-  
<sup>b</sup> cor. 20. 6. rem AD. Quoniam DC. CA :: <sup>a</sup> CA. CB.  
<sup>c</sup> 24. 5. <sup>b</sup> erit AL. BF :: DC. CB. Item ob DB. BA ::  
<sup>d</sup> sch. 14. 5. <sup>a</sup> BA. BC, <sup>b</sup> erit BG. BF :: DB. BC. <sup>c</sup> ergo  
 AL + BG. BF :: DC + DB. (BC). BC. ergo  
 AL + BG = BF. Q. E. D.

pag. 146. lin. penult. scribe, vel sic, sit  $a = \frac{x}{2}$ , &  
 $b = \frac{y}{2}$ . quare  $2a = x$ , &  $2b = y$ . ergo  $2a + 2b$   
 $= x + y$ . ergo  $a + b = \frac{x + y}{2}$ .

p. 147. lin. 17. scribe, Vel sic, sit  $a = \frac{2x}{3}$ ; &  
 $b =$

$$b = \frac{2y}{3}, \& x + y = g. \text{ ob } 3a = 2x, \& 3b = 2y,$$

$$\text{est } 3a + 3b = 2x + 2y = 2g. \text{ ergo } a + b = \frac{2}{3}g = \frac{2}{3}(x + y).$$

p. 149. lin. 9. scribe, Vel sic, sit  $a = \frac{b}{3}$ , &  $c = \frac{d}{3}$ ,  
vel  $3a = b$ , &  $3c = d$ . estque  $\frac{c}{a} = \frac{3c}{3a} = \frac{d}{b}$ . \* 15. 5.

ibid. lin. 27., dele, Applicare potes, &c. & scribe, Vel sic; sit  $a = \frac{2b}{3}$ , &  $c = \frac{2d}{3}$ . vel  $3a = 2b$ ,  
&  $3c = 2d$ . Est  $\frac{c}{a} = \frac{3c}{3a} = \frac{2d}{2b} = \frac{d}{b}$ .

Lemma.

AE, BF, CG, DH, Si proportionales  
A, B, C, D numeri A, B, C, D  
E, F, G, H. proportionales numeros AE, BF, CG,

DH metiantur per numeros E, F, G, H, erunt ei  
[E, F, G, H] proportionales.

Nam ob  $AEDH^a = BFCH^a$ , &  $AD = BC$ , a 19. 7.  
erit  $\frac{AEDH}{AD} = \frac{BFCH}{BC}$  hoc est  $BH = FG$ . b 1. ax. 7.  
c 9. ax. 7.

ergo E. F :: G. H. Q. E. D.

Coroll.

Hinc  $\frac{Bq}{Aq} = \frac{B}{A}$  in B. d Nam 1. B :: B. Bq. d & d 15. def. 7.

1. A :: A. Aq. e ergo 1. B :: B. Bq. d ergo  $\frac{Bq}{Aq} = \frac{B}{A}$  e lem. praes.

B x B. Similiter B in Bq = Bc. & sic de reliquis.  
 $\frac{B}{A} \frac{B}{A} \quad \frac{Bc}{Ac} \frac{Bc}{Ac} \quad \frac{Bcc}{Acc}$

PROP. 22.

Aq, B, C. Si tres numeri, Aq, B, C  
4, 8, 16. deinceps sint proportionales; pri-  
mus autem Aq sit quadratus, &  
tertius C quadratus erit.

D 4

Nam

a 10.7. Nam ob  $AqC^a = Bq$ ,  $b$  erit  $C = \frac{Bq^c}{\overline{Aq}} = Q. \frac{B}{\overline{A}}$   
 b 7. ax. 7.  
 c cor. lem. Liqueat verò B esse numerum,  $d$  ob  $\frac{Bq}{\overline{Aq}}$ , vel C nu-  
 præ,  
 d hyp. merum. ergò si tres, &c.  
 & 14.8.

## PROP. 23.

Ac, B, C, D. Si quatuor numeri Ac,  
 8, 12, 18, 27. B, C, D deinceps sint pro-  
 portionales, primus autem  
 Ac sit cubus; & quartus D cubus erit.

a 19.7. Nam quia  $AcD^a = BC$ ,  $b$  erit  $D = \frac{BC}{\overline{Ac}}$   
 b 7. ax. 7.  
 c cor. lem.  $e = B \times C$ ; hoc est (ob  $Ac C = d Bq$ , &  $b$  pro-  
 præ.  
 d 10.7. inde  $C = \frac{Bq}{\overline{Ac}})$   $D = \frac{B \times Bq^c}{\overline{Ac} \overline{Ac}} = \frac{Bc^e}{\overline{Acc}} = C: \frac{B}{\overline{Ac}}$ .  
 e 15.8. e liqueat verò ipsum B esse numerum, quia  $\frac{Bc}{\overline{Ac}}$ , vel  
 D numerus ponitur; ergò si quatuor numeri, &c.

Aliud Coroll. pro 24. 8. quod ponatur primo  
 loco, sic

## Coroll.

Hinc si fuerint duo numeri similes AB, CD  
 [  $A.B :: C.D$  ], primus autem AB sit quadratus;  
 etiam secundus CD quadratus erit.

\* 11, & 18. \* Nam AB. CD :: Aq. Cq.  
 8.  
 2. Liqueat ex his &c.

## Coroll. pro 25. 8.

Hinc etiam si fuerint duo numeri ABC, DEF  
 (  $A.B :: D.E$  &  $B.C :: E.F$  ); primus au-  
 tem ABC. cubus fuerit, etiam secundus DEF  
 cubus erit.

\* Nam

\* Nam  $ABC. DEF :: AC = DC.$

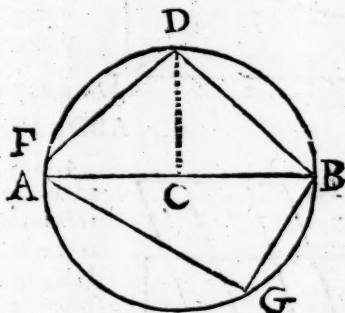
2. Patet etiam ex his &c.

\* 12, & 13  
8.

p. 180. versus imum paginæ, dele, Sic quidem  
*Euclides* satis, &c.

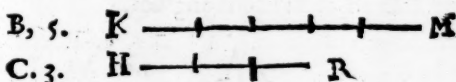
p. 181. ad imum. dele. In hac demonstr. non-  
nulla, &c.

p. 192. substitue hanc figuram.



p. 193. PROP. 1, Accipe C &c. scribe, a Acci- a post. 10.  
pe C, &c.

p. 199. ad Lemm. a 2, substituaturs hæc figura,

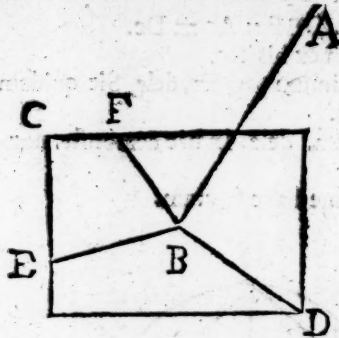


p. 211. lin. 7. dele, Sin latera ipsorum, &c. &  
substitue sic; Planos autem dissimiles quocunque  
reperies ope scholii 272. 8.

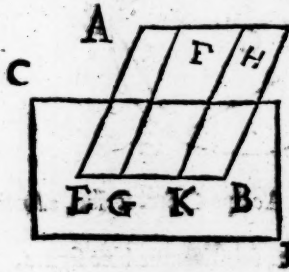
p. 242. inter adjetæ sunt, & MG, EF, inter-  
pone, æquales.

p. 263. ad def. 3. scribe sic,

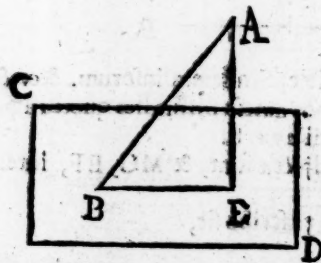
3. Linea



3. Linea recta AB est ad planum CD recta, cum ad rectas omnes lineas BD, BE, BF, à quibus illa tangitur, quæq; in proposito sunt plano, rectos efficit angulos ABD, ABE, ABF.

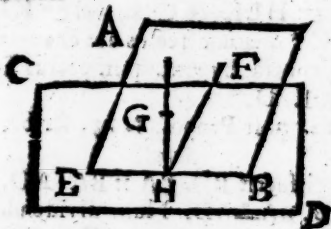


4. Planum AB ad planum CD rectum est, cum rectæ lineæ FG, HK, quæ communi planorum sectioni EB ad rectos angulos in uno plano AB ducuntur, alteri plano CD ad rectos sunt angulos.



5. Rectæ lineæ AB ad planum CD inclinatio est, cum à sublimi termino A rectæ illius lineæ AB ad planum CD deducta fuerit perpendicularis AE; atq; à puncto E, quod perpendicularis AE in ipso plano CD fecerit, ad propositæ illius lineæ extremum.

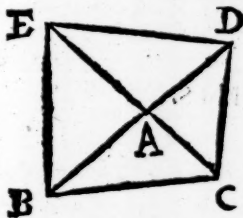
tremum B, quod in eodem est plano, altera recta linea EB fuerit adjuncta; est, inquam, angulus acutus ABE insidente lineâ AB, & adjuncta EB comprehensus.



6. Plani AB ad planum CD inclinatio, est angulus acutus FHG rectis lineis FH, GH contentus, quæ in utroque planorum AB, CD ad idem communis sectionis BE punctum H ductæ, rectos cum sectione BE efficiunt angulos FHB, GHB.

pag. 275. Propositio 21 scribatur sic.

PROP. 21.



*Omnis solidus angulus A sub minoribus quàm quatuor rectis angulis planis continetur.*

Laterâ enim solidi anguli A secans planum utcumque faciat figuram multilateram

BCDE, & totidem triângula ABC, ACD, ADE, AEB. Omnes angulos polygoni voco X; & summam angulorum ad trigonorum bases voco Y.

quare  $X + 4 \text{ Rect.}^a = Y + A$ . Quia verò (ex a 32.1. & angulis ad B) <sup>b</sup> est ang. ABE + ABC  $\sqsubset$  CBE, <sup>sch. 32.1.</sup>

idémque verum sit de angulis ad C, ad D, ad E, <sup>b 20.11.</sup> <sup>c 5. ax. 1.</sup>

eliquet fore  $Y \sqsubset X$ . proinde erit  $A \supset 4 \text{ Rect.}^c$

Q. E. D.

P. 277.

a confir.  
 & 8.1.  
 b 21.1.  
 \* 4. cor.  
 13.1.

p. 277. *lin.* antepen. dele Brevitatis causâ asq.  
 &c. & scribe sic; Assumptum est fore  $AD \sqsubset HL$ .  
 Hoc autem constat. Nam si  $AD =$  vel  $\sqsubset HL$ ,  
 erit ang.  $A^a =$ ,<sup>b</sup> vel  $\sqsubset HLI$ . Eodem modo erit  
 $B =$ , vel  $\sqsubset HLK$ , &  $C =$ , vel  $\sqsubset KLI$ . quare  
 $A + B + C$  \* quatuor rectos aut exæquabunt, aut  
 excedent, contra hypoth. quin potius sit  $AD \sqsubset$   
 $HL$ . Q. E. D.

pag. 312. post Propos. 5. 13. scribe.

*Schol.*

Quòd si fuerit  $BD$ .  $BA :: BA$ .  $AD$ . erit  $BA$ .  
 $AD :: AD$ .  $BA - AD$ . Nam dividendo est  $BD$   
 $- BA$  ( $AD$ )  $BA :: BA - AD$ .  $AD$ . ergò in-  
 versè,  $BA$ .  $AD :: AD$ .  $BA - AD$ . Q. E. D.

p. 315. *lin.* 1. ad marginem appone; sch. 5. 13.

p. 319. *lin.* 5. ab imo scribe; 2. Si  $L$ . centrum  
 fuerit, erit  $AB$ .  $LC :: 6$ . 1. Nam &c. ibid.

pag. 328. *lin.* 5. ab imo. dele Area, & scribe, pe-  
 riphæria circuli majoris 6 128318.

FINIS.



## Errata quædam in citationibus.

<i>pag.</i>	<i>propos.</i>	<i>lege</i>
17	2 <i>schol.</i>	<sup>b</sup> <i>hyp. &amp; 2. ax.</i>
81	8	<sup>b</sup> <i>hyp.</i>
102	14	<sup>g</sup> <i>11. 5. &amp; 9. 5.</i>
103	16	<sup>a</sup> <i>15. 5.</i>
122	13	<sup>a</sup> <i>31. 3.</i>
125	16	<sup>c</sup> <i>12. 6.</i>
129	22	<sup>a</sup> <i>19. 6.</i>
208	26	<sup>b</sup> <i>cor. 16. 6.</i>

## Emendanda in Epistolis.

In *epist. dedic. pag. 1. lin. 13. pro quâ lege quàm.*  
*pag. 2. lin. penult. lege introspectit.*

In *epist. ad Lect. pag. 1. lege, Tacquetus [quem*  
*ideò &c.*

*pag. 2. lin. 23. inter [solidarum, & appri-*  
*mè ] interpone vocab. [ intellectum ]*

*pag. 4. lin. ult. & princ. seq. lege, Deinde*  
*sæpenumerò evenit ut prædicta methodus super-*  
*vacaneas, &c.*

## Errata

# Errata nonnulla in libro.

<i>pag.</i>	<i>lin.</i>	<i>Error.</i>	<i>Corrections.</i>
5	9	DE	DE
25	21	pono	porro
37	16	Acq	ACq
42	<i>penult.</i>	DBq—	DBq—:
59	5	AD=BC	AC=BD
61	7	circulum C	circulum in C
72	21	plurimæ	plures
92	28	universè	inversè
95	<i>penult.</i>	GI	HI
96	31	7. def.	6. def.
97	<i>penult.</i>	aliquoties	toties
110	12	=DF	⊃ DF
		$\overline{EF}$	$\overline{EF}$
110	<i>penult.</i>	⊃H	⊃H
		$\overline{C}$	$\overline{C}$
111	12	D	D
		$\overline{E}$	$\overline{F}$
119	25	$\frac{1}{3}$ AG	$\frac{1}{3}$ (AG)
120	10	secundæ	secundæ
168	<i>penult.</i>	Aq	AB
192	29	$\sqrt{10}—\sqrt{20}$	$\sqrt{10}—\sqrt{20}$
202	<i>ult.</i>	HKq	GKq
228	11	parallela	parallelæ
228	19	RMR	RMP
275	15	BC	EC
306	18	semissem AC	semissem BC
312	11	2æc.+cc	2æc.+2 cc
314	<i>ult.</i>	AC	AD
317	28	EK	CK
329	20	area	periphæria
341	2	Octædram	Dodecaedrum